

**FACT SHEET**  
**REISSUANCE OF A GENERAL VPDES PERMIT**  
**FOR INDUSTRIAL ACTIVITY STORM WATER DISCHARGES**

The Virginia State Water Control Board has under consideration the reissuance of a general VPDES permit for point source discharges of storm water associated with industrial activity to surface waters.

Permit Number: VAR05

Name of Permittee: Any owner in the Commonwealth of Virginia agreeing to be regulated under the terms of this general permit.

Facility Location: Commonwealth of Virginia

Receiving Waters: Surface waters within the boundaries of the Commonwealth of Virginia, except waters specifically named in Board regulations or policies which prohibit such discharges.

On the basis of preliminary review and application of lawful standards and regulations, the State Water Control Board proposes to reissue the general permit subject to certain conditions and has prepared a draft permit. The category of discharges to be included involves storm water discharges from subcategories of industrial facilities with the same or similar types of operations, and discharging the same or similar types of wastes. The Board has determined that this category of discharges is appropriately controlled under a general permit. The draft general permit requires that all covered facilities within a particular subcategory meet standardized permit conditions and monitoring requirements, and provides dates for submitting monitoring data where required. This permit will maintain the Water Quality Standards adopted by the Board. This general permit will replace the general permit VAR05 which expires on June 30, 2009. Owners covered under the expiring general permit who wish to continue to discharge under a general permit must register for coverage under the new permit.

All pertinent information is on file and may be inspected, and arrangements made for copying by contacting Burt Tuxford at:

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**Administrative**

The general permit will have a fixed term of five (5) years effective, upon Board approval, July 1, 2009. Every authorization to discharge under this general permit will expire at the same time and all authorizations to discharge will be renewed on the same date. Discharges will be covered under the general permit upon approval of the Registration Statement, completion of the 30-day Registration Statement public review period, and delivery of a copy of the general permit to the applicant.

This general permit does not apply to any new or increased discharge that will result in significant effects to the receiving waters. That determination is made in accordance with the State Water Control Board's Anti-degradation Policy contained in the Virginia Water Quality Standards, 9 VAC 25-260-30. Anti-backsliding will also be considered prior to granting coverage under this general permit to operations currently discharging under another VPDES permit.

If a discharge appears to qualify for this general permit, the operator must submit a general permit Registration Statement to apply for general permit coverage. Complete Registration Statements will be posted on the Department's public web page for a 30-day public review period. After the review

period, the Department will either send a copy of the general permit to those applicants that qualify, or send a copy of the VPDES individual permit application to those that do not qualify.

### Activities Covered Under This General Permit

The permit covers point source discharges of storm water associated with industrial activity to surface waters of the Commonwealth, including discharges through municipal or non-municipal separate storm sewer systems. The permit is intended to cover discharges from the industrial sectors/activities listed in Table 1. Owners/operators of facilities currently covered under the 2004 Industrial Storm Water General Permit (ISWGP) who wish to obtain coverage under this general permit must submit a new Registration Statement to be covered under this permit.

This permit covers storm water discharges from a wide variety of industrial activities. Because the conditions which affect the presence of pollutants in storm water discharges vary among industries, the permit contains both general storm water pollution prevention plan requirements that apply to all facilities, and industry-specific sections (sector specific requirements) that describe any additional storm water pollution prevention plan requirements, applicable numeric effluent limitation requirements, and any benchmark monitoring requirements for that industrial sector.

TABLE 1: SECTORS OF INDUSTRIAL ACTIVITY COVERED BY THIS PERMIT.	
SIC Code or Activity Code	Activity Represented
Sector A: Timber Products	
2411	Log Storage and Handling (Wet deck storage areas are only authorized if no chemical additives are used in the spray water or applied to the logs).
2421	General Sawmills and Planing Mills.
2426	Hardwood Dimension and Flooring Mills.
2429	Special Product Sawmills, Not Elsewhere Classified.
2431-2439 (except 2434 - see Sector W)	Millwork, Veneer, Plywood, and Structural Wood.
2441, 2448, 2449	Wood Containers.
2451, 2452	Wood Buildings and Mobile Homes.
2491	Wood Preserving.
2493	Reconstituted Wood Products.
2499	Wood Products, Not Elsewhere Classified.
Sector B: Paper and Allied Products	
2611	Pulp Mills.
2621	Paper Mills.
2631	Paperboard Mills.
2652-2657	Paperboard Containers and Boxes.
2671-2679	Converted Paper and Paperboard Products, Except Containers and Boxes.
Sector C: Chemical and Allied Products	
2812-2819	Industrial Inorganic Chemicals.
2821-2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass.
2833-2836	Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; In Vitro and In Vivo Diagnostic Substances; Biological Products, Except Diagnostic Substances.

2841-2844	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations.
2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products.
2861-2869	Industrial Organic Chemicals.
2873-2879	Agricultural Chemicals.
2891-2899	Miscellaneous Chemical Products.
3952 (limited to list)	Inks and Paints, Including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints and Artist's Watercolors.
Sector D: Asphalt Paving and Roofing Materials and Lubricants	
2951, 2952	Asphalt Paving and Roofing Materials.
2992, 2999	Miscellaneous Products of Petroleum and Coal.
Sector E: Glass Clay, Cement, Concrete, and Gypsum Products	
3211	Flat Glass.
3221, 3229	Glass and Glassware, Pressed or Blown.
3231	Glass Products Made of Purchased Glass.
3241	Hydraulic Cement.
3251-3259	Structural Clay Products.
3261-3269	Pottery and Related Products.
3274, 3275	Concrete, Gypsum and Plaster Products, Except: Concrete Block and Brick; Concrete Products, Except Block and Brick; and Ready-mixed Concrete Facilities (SIC 3271-3273).
3281	Cut Stone and Stone Products
3291-3299	Abrasive, Asbestos, and Miscellaneous Non-metallic Mineral Products.
Sector F: Primary Metals	
3312-3317	Steel Works, Blast Furnaces, and Rolling and Finishing Mills.
3321-3325	Iron and Steel Foundries.
3331-3339	Primary Smelting and Refining of Nonferrous Metals.
3341	Secondary Smelting and Refining of Nonferrous Metals.
3351-3357	Rolling, Drawing, and Extruding of Nonferrous Metals.
3363-3369	Nonferrous Foundries (Castings).
3398, 3399	Miscellaneous Primary Metal Products.
Sector G: Metal Mining (Ore Mining and Dressing)	
1011	Iron Ores.
1021	Copper Ores.
1031	Lead and Zinc Ores.
1041, 1044	Gold and Silver Ores.
1061	Ferroalloy Ores, Except Vanadium.
1081	Metal Mining Services.
1094, 1099	Miscellaneous Metal Ores.

Sector H: Coal Mines and Coal Mining Related Facilities	
1221-1241	Coal Mines and Coal Mining-Related Facilities.
Sector I: Oil and Gas Extraction and Refining	
1311	Crude Petroleum and Natural Gas.
1321	Natural Gas Liquids.
1381-1389	Oil and Gas Field Services.
2911	Petroleum Refineries.
Sector K: Hazardous Waste Treatment, Storage, or Disposal Facilities	
HZ	Hazardous Waste Treatment Storage or Disposal.
Sector L: Landfills and Land Application Sites	
LF	Landfills, Land Application Sites, and Open Dumps.
Sector M: Automobile Salvage Yards	
5015	Automobile Salvage Yards.
Sector N: Scrap Recycling Facilities	
5093	Scrap Recycling Facilities.
4499 (limited to list)	Dismantling Ships, Marine Salvaging, and Marine Wrecking - Ships For Scrap
Sector O: Steam Electric Generating Facilities	
SE	Steam Electric Generating Facilities.
Sector P: Land Transportation and Warehousing	
4011, 4013	Railroad Transportation.
4111-4173	Local and Highway Passenger Transportation.
4212-4231	Motor Freight Transportation and Warehousing.
4311	United States Postal Service.
5171	Petroleum Bulk Stations and Terminals.
Sector Q: Water Transportation	
4412-4499 (except 4499 facilities as specified in Sector N)	Water Transportation.
Sector R: Ship and Boat Building or Repairing Yards	
3731, 3732	Ship and Boat Building or Repairing Yards.
Sector S: Air Transportation	
4512-4581	Air Transportation Facilities.
Sector T: Treatment Works	
TW	Treatment Works.
Sector U: Food and Kindred Products	
2011-2015	Meat Products.
2021-2026	Dairy Products.
2032-2038	Canned, Frozen and Preserved Fruits, Vegetables and Food Specialties.

2041-2048	Grain Mill Products.
2051-2053	Bakery Products.
2061-2068	Sugar and Confectionery Products.
2074-2079	Fats and Oils.
2082-2087	Beverages.
2091-2099	Miscellaneous Food Preparations and Kindred Products.
2111-2141	Tobacco Products.
Sector V: Textile Mills, Apparel, and Other Fabric Product Manufacturing, Leather and Leather Products	
2211-2299	Textile Mill Products.
2311-2399	Apparel and Other Finished Products Made From Fabrics and Similar Materials.
3131-3199 (except 3111 - see Sector Z)	Leather and Leather Products, except Leather Tanning and Finishing.
Sector W: Furniture and Fixtures	
2434	Wood Kitchen Cabinets.
2511-2599	Furniture and Fixtures.
Sector X: Printing and Publishing	
2711-2796	Printing, Publishing, and Allied Industries.
Sector Y: Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries.	
3011	Tires and Inner Tubes.
3021	Rubber and Plastics Footwear.
3052, 3053	Gaskets, Packing, and Sealing Devices and Rubber and Plastics Hose and Belting.
3061, 3069	Fabricated Rubber Products, Not Elsewhere Classified.
3081-3089	Miscellaneous Plastics Products.
3931	Musical Instruments.
3942-3949	Dolls, Toys, Games and Sporting and Athletic Goods.
3951-3955 (except 3952 facilities as specified in Sector C)	Pens, Pencils, and Other Artists' Materials.
3961, 3965	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal.
3991-3999	Miscellaneous Manufacturing Industries.
Sector Z: Leather Tanning and Finishing	
3111	Leather Tanning, Currying and Finishing.
Sector AA: Fabricated Metal Products	
3411-3499	Fabricated Metal Products, Except Machinery and Transportation Equipment.
3911-3915	Jewelry, Silverware, and Plated Ware
Sector AB: Transportation Equipment, Industrial or Commercial Machinery	
3511-3599 (except 3571-3579 - see Sector AC)	Industrial and Commercial Machinery (Except Computer and Office Equipment).
3711-3799 (except 3731,	Transportation Equipment (Except Ship and Boat Building and Repairing).

3732 - see Sector R)	
Sector AC: Electronic, Electrical, Photographic, and Optical Goods	
3571-3579	Computer and Office Equipment.
3612-3699	Electronic, Electrical Equipment and Components, Except Computer Equipment.
3812-3873	Measuring, Analyzing and Controlling Instrument; Photographic and Optical Goods.
Sector AD: Non-classified Facilities/Storm Water Discharges Designated By the Board As Requiring Permits	
N/A	Other Storm Water Discharges Designated By the Board As Needing a Permit (see 9 VAC 25-31-120 A 1 c) or Any Facility Discharging Storm Water Associated With Industrial Activity Not Described By Any of Sectors A-AC.  (Note: Facilities may not elect to be covered under Sector AD. Only the Director may assign a facility to Sector AD.)

The volume and quality of storm water discharges associated with industrial activity will depend on a number of factors, including the industrial activities occurring at the facility, the nature of precipitation, and the degree of surface imperviousness. Pollutants in storm water discharges from industrial plants may be reduced using the following methods: eliminating pollution sources, implementing Best Management Practices (BMPs) to prevent pollution, using traditional storm water management practices, and providing end-of-pipe treatment.

This VPDES general permit follows the basic framework of the U.S. EPA final 2008 Multi-Sector General Permit (MSGP) published in the Federal Register on September 29, 2008 (73 FR 56572). Readers are also referred to the September 29, 1995 Federal Register (60 FR 50803 - EPA's 1995 MSGP), and EPA's final 2008 MSGP Fact Sheet (available on EPA's web site at <http://cfpub2.epa.gov/npdes/stormwater/msgp.cfm>) for details on the profiles of the various industrial sectors, reviews of pollutants found in storm water, selection of analytical monitoring parameters, estimated costs for pollution prevention measures, and storm water pollution control options for each industry type.

In the case where a facility has industrial activities occurring on-site which are described by any of the subsectors in the general permit, those industrial activities are considered to be co-located industrial activities. Storm water discharges from co-located industrial activities are authorized by this permit, provided that the permittee complies with any and all additional pollution prevention plan and monitoring requirements applicable to the co-located industrial activity. Permittees are required to determine which additional pollution prevention plan and monitoring requirements are applicable to the co-located industrial activity by examining the narrative descriptions of each sector specific coverage section of the permit (Discharges Covered Under This Section).

#### Limitations on Coverage

Because of the broad scope of this permit, most industrial activities currently regulated under the VPDES storm water program are eligible to be covered under the permit. There are, however, several types of storm water discharges which are not covered under this permit. Discharges into a waterbody where a discharge is restricted or prohibited by another policy or regulation of the State Water Control Board are not authorized by this general permit. If an owner has been required to obtain an individual VPDES permit for their storm water discharges pursuant to 9 VAC 25-31-170 B (VPDES Permit Regulation), they are not authorized for coverage under this permit. Discharges from Department of Conservation and Recreation (DCR) Virginia Storm Water Management (VSMP) permitted construction activities are also not eligible for coverage under this permit.

Other discharges of storm water that are not authorized under the general permit are:

1. Discharges that are not within the industrial sectors identified in Table 1 (unless they are designated by the Board for coverage under sector AD);

2. Discharges that are mixed with sources of non-storm water unless the non-storm water component of the discharge is listed below under the authorized non-storm water discharges, or is in compliance with a different VPDES permit;
3. Discharges that are located at a facility where a VPDES permit has been terminated (other than at the request of the permittee) or denied; and
4. Discharges subject to storm water effluent limitation guidelines not described in the permit.

Storm water discharges from non-metallic mineral mining facilities (SIC Major Group 14), and concrete block and brick; concrete products, except block and brick; and ready-mixed concrete facilities (SIC codes 3271-3273) are not covered by this permit. Facilities in these SIC categories should seek coverage under separate VPDES general permits developed specifically for these industries.

Authorized non-storm water discharges. The following non-storm water discharges are authorized by this permit: discharges from fire fighting activities; fire hydrant flushings; potable water including water line flushings; uncontaminated air conditioning or compressor condensate (excluding air compressors); irrigation drainage; landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with manufacturer's instructions; pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed); routine external building wash down which does not use detergents; uncontaminated ground water or spring water; foundation or footing drains where flows are not contaminated with process materials; and incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but NOT intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

Non-storm water discharges are allowable under this permit provided the permittee includes the following information in the SWPPP: (a) an identification of each allowable non-storm water source, except for flows from fire fighting activities; (b) the location where the non-storm water is likely to be discharged; and (c) descriptions of appropriate BMPs for each source. All other non-storm water discharges, whether mixed with storm water or not, must be in compliance with a VPDES permit (other than this general permit) issued for the discharge.

#### Summary of Significant Changes From the 2004 Industrial Storm Water General Permit

This general permit replaces the 2004 ISWGP which was issued for a five-year term on July 1, 2004. Following is a list of significant changes included in the permit as compared to the 2004 permit:

**Section 10 - Definitions.** Modified the "Industrial activity" definition category 5 (Landfills, land application sites, and open dumps) to add "debris/wastes from DCR VSMP regulated construction activities/sites".

Added definitions for "existing discharger", "impaired water", and "total maximum daily load".

#### **Section 50 - Authorization to discharge.**

A 4. Authorized Non-Storm Water Discharges. Deleted the phrase "provided the nonstorm water component of the facility's discharge is in compliance with 9 VAC 25-151-70, Part III D 2".

- A 4 d. Uncontaminated air conditioning or compressor condensate. Added "excluding air compressors".

B. Limitations on coverage.

- B 3 e. Added this new subsection for new dischargers (i.e., those without VPDES permit coverage for their storm water discharges) discharging to impaired waters without an established and approved TMDL, and explaining what those facilities had to do to be allowed to be covered under the general permit.

- B 3 f. Added a sentence to this subsection (Antidegradation Policy - previously was subsection 3 e) clarifying how the Department will address proposed discharges to high quality waters (Tier II) and exceptional waters (Tier III).
- B 5. Added this subsection stating that "Storm water discharges associated with construction activity that are regulated under DCR's VSMP permit program are not authorized by this permit."
- Table 50-1. Sectors of Industrial Activity Covered by This Permit. Removed SIC codes 3271 and 3272 (concrete products facilities) from the list of authorized facilities since they are now covered under their own general permit.

#### **Section 60 - Registration Statement and SWPPP.**

A. Clarified that for new facilities the SWPPP must be prepared and implemented prior to the submittal of the registration statement, and that existing permittees who intend to continue coverage under this GP must review and update the SWPPP to meet any new permit requirements by October 1, 2009.

C. Registration Statement Contents. Asked for the name, address, etc. for (1) the site property owner; (2) the operator applying for permit coverage; and (3) the party who will be legally responsible for the permit. Removed the requirement that the applicant tell us if the SWPPP has been prepared. Deleted the topographic map submittal requirement, and required that the SWPPP general location map, and for new facilities the SWPPP site map, be submitted with the registration statement. Existing permittees must submit the SWPPP site map (revised with the new requirements for this reissuance) as soon as possible, but not later than October 1<sup>st</sup>, 2009. If the applicant's facility is a landfill, asked them to tell us the type of landfill. If the facility is a timber products operation, asked them to identify any outfalls that receive discharges from wet decking areas.

F. Added this new subsection stating that the Department will post all registration statements received to the agency's public web site for 30 days prior to the Department granting coverage under the general permit.

**Section 65 - Termination of permit coverage.** Removed the requirement that the termination notice has to be filed within 30 days after they meet one of three possible conditions (the owner can now file the notice anytime).

#### **Section 70 - General permit.**

##### **Part I A - Effluent Limitations, Monitoring Requirements and Special Conditions.**

- 1. Monitoring. Broke the monitoring into three sections: (a) quarterly visual monitoring; (b) benchmark monitoring for specific industrial activities; and (c) compliance monitoring for facilities subject to numerical effluent limitations or discharges to impaired waters.
  - a. Quarterly Visual Monitoring. Clarified that if no qualifying rainfall event occurred "during daylight hours" for that quarter, the permittee is excused from the quarterly visual monitoring that quarter. For inactive and unstaffed sites, clarified the monitoring waiver to add that there must be "no industrial materials or activities exposed to storm water" for them to qualify for this waiver. Moved the Representative Outfalls section up from the Part I A 2 "Monitoring Instructions" section. Added a section to indicate when the monitoring starts if the facility's permit coverage is effective less than a month from the end of a monitoring period.
  - b. Benchmark Monitoring. Updated Table 70-1 to show the industrial sectors that had monitoring requirements added (sectors N, P, R, S, U, and AD), and the revised benchmark monitoring parameters. Clarified that benchmark monitoring must be



performed at least once during at least the first two, and potentially all monitoring periods, unless they qualify for a waiver; defined the monitoring periods; added a section to indicate when the monitoring starts if the facility's permit coverage is effective less than a month from the end of a monitoring period. Clarified that benchmark monitoring waiver requests will be evaluated by DEQ based upon (1) benchmark monitoring results below the applicable benchmark concentration values; (2) a favorable compliance history (including inspection results); and (3) no outstanding enforcement actions. Also added that the benchmark monitoring waivers may be revoked by DEQ for cause. Clarified the monitoring waiver for inactive and unstaffed sites to add that there must be "no industrial materials or activities exposed to storm water" for them to qualify for this waiver. Moved the Representative Outfalls section up from the Part I A 2 "Monitoring Instructions" section.

- c. Compliance Monitoring For Discharges Subject To Numerical Effluent Limitations or Discharges to Impaired Waters. Broke this into four subsections: (1) facilities subject to storm water effluent limitation guidelines; (2) coal pile runoff monitoring; (3) facilities discharging to an impaired water with a Board established and EPA approved TMDL wasteload allocation; and, (4) facilities discharging to an impaired water without a Board established and EPA approved TMDL wasteload allocation.

(1) Facilities subject to storm water effluent limitation guidelines. Clarified that monitoring must be performed at least once during each of the monitoring periods; defined the monitoring periods; added a section to indicate when the monitoring starts if the facility's permit coverage is effective less than a month from the end of a monitoring period.

(2) Coal Pile Runoff Monitoring. Clarified that monitoring must be performed at least once during each of the monitoring periods; defined the monitoring periods; added a section to indicate when the monitoring starts if the facility's permit coverage is effective less than a month from the end of a monitoring period.

(3) Facilities discharging to an impaired water with a Board established and EPA approved TMDL wasteload allocation (WLA). This is a new section for this reissuance. Facilities will be given written notification from DEQ that they are subject to TMDL monitoring. Required the monitoring to be conducted at least semi-annually; defined the monitoring periods; indicated when the monitoring starts if the facility is notified that they are subject to the TMDL monitoring requirements less than a month from the end of a monitoring period. Included a provision that allows facilities to discontinue the TMDL monitoring after the first four monitoring periods (subject to Department approval) if the pollutant subject to the TMDL is not detected in any of the samples.

(4) Facilities discharging to an impaired water without a Board established and EPA approved TMDL wasteload allocation (WLA). This is a new section for this reissuance. Facilities will be given written notification from DEQ that they are subject to the impaired water monitoring. Facilities must monitor once during the monitoring period (essentially annually) for all the pollutants that are causing the impairment. Facilities may be waived from further monitoring if the pollutant is not present in their discharge, or the presence is due solely to natural background conditions. Monitoring must be submitted annually on a DMR to the Department.

- 2. Monitoring Instructions. Deleted the Monitoring Periods subsection and moved it to each of the individual monitoring sections. Moved the Representative Outfalls subsection to the quarterly visual monitoring and benchmark monitoring sections since that provision only applies to those types of monitoring. Added a requirement that a facility document in the SWPPP any inability to obtain a sample, of no rain event, or of no "measurable" storm event.

- 3. Monitoring waivers. Deleted the alternative certification of "not present" or "no exposure" to be consistent with EPA's final 2008 MSGP.
- 4. Reporting Monitoring Results. For effluent limitation monitoring, specified that the DMR due date is January 10<sup>th</sup>. Added a section requiring TMDL WLA monitoring to be submitted by July 10<sup>th</sup> and January 10<sup>th</sup>. Changed the benchmark monitoring section to require monitoring to be submitted on a DMR by January 10<sup>th</sup>. Added a follow-up monitoring section requiring this monitoring to be submitted on a DMR no later than 30 days after the results are received. Added a significant digits section to discuss the number of significant digits to report the monitoring data to.
- 5. Corrective Actions. Added this section that describes actions that the permittee must take if (a) benchmark monitoring results exceed benchmark monitoring concentrations; (b) routine facility inspections, comprehensive site compliance evaluations, facility inspections, or other observations result in discovery of a deficiency; or (c) there is an exceedance of an effluent limitation, TMDL wasteload allocation or a water quality standard. For exceedances of an effluent limitation, TMDL wasteload allocation or a water quality standard, the permittee must conduct follow-up monitoring and reporting on the schedule set in the permit until the results indicate that the limitation/allocation/standard is no longer being exceeded.

Added a sentence to Part I A 5 a (1) (Data Exceeding Benchmark Concentration Values) that allows a facility extra time if construction is necessary to implement BMPs that are added in response to the required SWPPP evaluation. Also added this provision into the Part I A 5 b (3) (Corrective Actions) subsection.

Added subsection Part I A 5 a (2) that allows a facility to forgo corrective action for benchmark exceedances where the exceedance is due to natural background conditions.

#### Part I B - Special Conditions

- 1. Allowable Non-storm Water Discharges. Deleted the phrase "provided the nonstorm water component of the discharge is in compliance with Part III D 2 (Nonstorm water discharges) of this general permit:". Added a list of the non-storm water discharges from the Sector Specific SWPPP section (Part IV) that are specifically not authorized by the permit.
- 6. Salt storage piles. Added a requirement for the permittee to implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the salt pile. Added a requirement for all salt storage piles to be located on an impervious surface, and a requirement that all runoff from the pile, and/or runoff that comes in contact with salt, including under drain systems, be collected and contained within a bermed basin lined with concrete or other impermeable materials, or within an underground storage tank, or within an above ground storage tank, or disposed of through a sanitary sewer (with the permission of the treatment facility). A combination of any or all of these methods may be used. Salt contaminated stormwater is not allowed to be discharged directly to the ground or to state waters.
- 7. Discharges to Waters Subject to TMDL WLAs. Added this special condition requiring facilities that are a source of the pollutant of concern to TMDL waters (Board established and EPA approved prior to the term of the permit) to incorporate measures and controls into their SWPPP to address the TMDL requirements, to implement BMPs designed to meet any specific waste load allocations that apply to the facility, and to perform any required monitoring. DEQ will notify the permittee that they are subject to the TMDL requirements, and if there are monitoring requirements associated with the TMDL.
- 8. Water Quality Protection. Added several sentences from EPA's final 2008 MSGP requiring the permittee to control discharges as necessary to meet applicable water quality standards,

and indicating that it is expected that compliance with the conditions of this permit will control discharges as necessary to meet applicable water quality standards.

Added "an excursion above a TMDL waste load allocation" to the list of things that the Board may potentially take action on.

- 9. Adding/Deleting Storm Water Outfalls. Added this special condition to allow the permittee to add or delete storm water outfalls at the facility as necessary or appropriate. The permittee has to update the SWPPP and notify DEQ of the change within 30 days of the change.
- 10. Antidegradation Requirements for New or Increased Discharges to High Quality Waters. Added this special condition to discuss how new or expanded discharges from a facility may be subject to additional SWPPP control measures, or may require that the facility apply for an individual permit in order to meet the applicable antidegradation requirements.

#### Part II - Conditions Applicable to All VPDES Permits

- B 2. (Retention of records). Modified the records retention requirement to require that records be kept for three years following the date that coverage under this permit expires or is terminated, to be consistent with EPA's final 2008 MSGP.
- M. Duty to Reapply. To be consistent with the Registration Statement section, changed the time to submit a registration statement to reapply for permit coverage from 180 to 90 days prior to the expiration date of the permit.

#### Part III - Storm Water Pollution Prevention Plan

- A 1. Deadlines for Plan Preparation and Compliance - Facilities That Were Covered Under the 2004 ISWGP. Changed the requirement to allow existing permittees until October 1<sup>st</sup>, 2009 to review and update their SWPPP.
- B. Contents of the Plan
  - B 2 c. Site Map. Added the following things to show on the map: size of the property; location and extent of significant structures and impervious surfaces; locations of all storm water conveyances; location of any salt piles; and the location of any MS4s the facility discharges to.
  - B 5. Sampling Data. Clarified that the summary of existing sampling data is for storm water sampling data, and stated that, at a minimum, the summary must include data from the previous permit term.
  - B 6. Storm Water Controls. Extensively rewrote B 6 a and the introduction to B 6 b to conform to changes made by EPA in their proposed 2006 MSGP, and their final 2008 MSGP. Eliminated the subsection headings of "(1) Nonstructural BMPs" and "(2) Structural BMPs", and listed all the BMPs types that must be implemented under subsection B 6 b. Added a title to B 6 b ("Control Measures (Non-numeric Technology-based Effluent Limits)") to be consistent with EPA's final 2008 MSGP. Edited the BMP descriptions to conform to the changes EPA made in their proposed 2006 MSGP.

B 6 b (5). Waived the routine facility inspection requirement for facilities that maintain an active E3/E4 status with DEQ. Added a requirement that at least once each calendar year the routine facility inspection shall be conducted during a period when a storm discharge is occurring. Changed the time period to correct deficiencies in the implementation of the SWPPP from 14 days to 30 days to be consistent with the Part I A 5 (Corrective Actions) requirement.
- C. Maintenance. Added a requirement that storm water BMPs be observed during active operation to ensure they are operating properly. Modified the remainder of the section to

conform to changes EPA made in their proposed 2006 MSGP. Changed the documentation requirements for maintenance activities to be consistent with EPA's final 2008 MSGP.

- D. Non-storm Water Discharges. Moved the certification of non-storm water discharges requirement to the Part III E "Comprehensive Site Compliance Evaluation" section (Part III E 1 h).
- E. Comprehensive Site Compliance Evaluation. Deleted the requirement that at least one member of the Pollution Prevention Team participate in the comprehensive site compliance evaluation, and added a statement that the personnel conducting the evaluations may be either facility employees or outside constituents hired by the facility.
  - E 1. Added the following things for facility personnel to evaluate: (1) evidence of pollutants discharging to surface waters at all facility outfalls, and the condition of and around the outfall, including flow dissipation measures to prevent scouring; (2) review of training performed, inspections completed, maintenance performed, quarterly visual examinations, and effective operation of BMPs; and (3) Certification of outfall evaluation for unauthorized discharges (this had been in the Part III C non-storm water discharges section). Changed this to an annual evaluation, and not a certification. Deleted the E 1 h (2) notification requirement and replaced it with an allowance for the permittee to request approval from the Department to be able to evaluate 20% of their outfalls annually on a rotating basis such that all outfalls are evaluated over the permit term.
  - E 2. SWPPP Modifications. Changed the time to complete revisions from 14 days to 30 days to be consistent with the Part I A 5 (Corrective Actions) requirement.
- F. Signature and Plan Review. Modified this section to be consistent with the changes EPA made for their final 2008 MSGP.
- G. Maintaining an Updated SWPPP.
  - G 1. Added the following conditions specifying when the SWPPP needs to be reviewed and, if appropriate, amended: (1) there is a spill, leak or other release at the facility; (2) there is an unauthorized discharge from the facility; and (3) the DEQ notifies the permittee that a TMDL has been developed and applies to the facility.
  - G 2. Added this subsection specifying when SWPPP modifications need to be made.
  - G 3. Added this subsection requiring specific information to be included if the SWPPP modification is based on a release or unauthorized discharge.
- H. Special Pollution Prevention Plan Requirements. Consistent with EPA's final 2008 MSGP, deleted this section, which dealt with additional requirements for facilities discharging through MS4s, and for facilities subject to EPCRA § 313 reporting requirements.

#### Part IV - Sector Specific Permit Requirements

- Renamed "Monitoring Cut-off Concentrations" to "Benchmark Concentrations".
- Sector A - Timber Products. Removed the benchmark monitoring for Zinc under the "General Sawmills and Planing Mills" (SIC 2421) category.
- Sector F - Primary Metals. Changed the routine facility inspection frequency from quarterly to monthly to be consistent with EPA's proposed 2006 MSGP.
- Sector G - Metal Mining. Added the following to the description of covered discharges: (1) storm water discharges from exploration and development of metal mining and/or ore dressing facilities; and (2) storm water discharges from facilities at mining sites undergoing reclamation. Added the EPA definition of Final Stabilization. Added a section on "Clearing, Grading and

Excavation Activities" from EPA's 2006 proposed MSGP. Deleted the separate section for "Inactive mining facilities" and included them in the section for "Active and temporarily inactive facilities". Added a section for "Termination of permit coverage" from EPA's 2006 proposed MSGP. Deleted the benchmark monitoring requirements for discharges from waste rock and overburden piles from Table 150-1, and put them in a new Table 150-2. Deleted the benchmark monitoring for Manganese to be consistent with EPA's final 2008 MSGP. Changed old Table 150-2 to Table 150-3.

- Sector I - Oil and Gas Extraction and Refining. Changed the routine facility inspection frequencies to monthly (two places) to be consistent with EPA's proposed 2006 MSGP.
- Sector L - Landfills. Deleted the definitions of "Land treatment facility", "Landfill", and "Surface Impoundment" to be consistent with EPA's final 2008 MSGP.
- Sector M - Automobile Salvage Yards. Added mercury switches to the list of things to inspect for leaks, and to train personnel on the proper handling of.
- Sector N - Scrap Recycling and Waste Recycling Facilities. Added requirements for mercury switch removal, inspection and spill clean-up as per EPA's proposed 2006 and final 2008 MSGP. For scrap recycling and waste recycling facilities (both types), changed the inspection frequency from quarterly to monthly to be consistent with EPA's proposed 2006 MSGP. For facilities engaged in "Ship Dismantling, Marine Salvaging and Marine Wrecking" (SIC 4499), added benchmark monitoring for Aluminum, Cadmium, Chromium, Iron, Lead and Zinc, and TSS.
- Sector P - Land Transportation and Warehousing. Added benchmark monitoring for TPH and TSS.
- Sector R - Ship and Boat Building or Repair Yards. Added benchmark monitoring for TSS.
- Sector S - Air Transportation. Added benchmark monitoring for COD and TSS.
- Sector U - Food and Kindred Products. Changed the routine facility inspection frequency to monthly to be consistent with EPA's proposed 2006 MSGP. Added benchmark monitoring for BOD<sub>5</sub> and TSS to "Dairy Products Facilities" (SIC 2021-2026).
- Sector AD - Non-classified Facilities/Storm Water Discharges Designated by the Board. Added benchmark monitoring for TSS.

#### Permit Effluent Limitations and Monitoring Requirements

1. Discharge Monitoring Requirements. The permit contains three general types of monitoring requirements: (a) quarterly visual monitoring; (b) benchmark monitoring for specific industrial activities; and (c) compliance monitoring for facilities subject to numerical effluent limitations or discharges to impaired waters. These are minimum monitoring requirements and if a permittee so chooses, he may conduct additional sampling to acquire more data to improve the statistical validity of the results. Through increased analytical or visual monitoring the permittee may be able to better ascertain the effectiveness of their pollution prevention plan.

a. Quarterly visual examination of storm water quality. Each industrial sector is required to conduct a quarterly visual examination of the storm water discharges from the facility. These visual examinations will assist with the evaluation of the pollution prevention plan, and provides a simple, low cost means of assessing the quality of storm water discharge with immediate feedback. Facilities covered under this permit are required to conduct a quarterly visual examination of storm water discharges associated with industrial activity from each outfall, except discharges exempted under the representative discharge provision. The visual examination of storm water outfalls should include any observations of color, odor, clarity,

floating solids, settled solids, suspended solids, foam, oil sheen, or other obvious indicators of storm water pollution. No analytical tests are required to be performed on these samples.

The examination of the sample must be made during daylight hours and in well lit areas. The visual examination is not required if there is insufficient rainfall or snow-melt to runoff, or if hazardous conditions prevent sampling. Whenever practicable the same individual should carry out the collection and examination of discharges throughout the life of the permit to ensure the greatest degree of consistency possible in recording observations. Grab samples for the examination shall be collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed 1 hour) of when the runoff begins discharging. Reports of the visual examination include: the examination date and time, examination personnel, visual quality of the storm water discharge, and probable sources of any observed storm water contamination. The visual examination reports must be maintained on site with the pollution prevention plan.

When conducting a storm water visual examination, the pollution prevention team, or team member, should attempt to relate the results of the examination to potential sources of storm water contamination on the site. For example, if the visual examination reveals an oil sheen, the facility personnel (preferably members of the pollution prevention team) should conduct an inspection of the area of the site draining to the examined discharge to look for obvious sources of spilled oil, leaks, etc. If a source can be located, then this information allows the facility operator to immediately conduct a clean-up of the pollutant source, and/or to design a change to the pollution prevention plan to eliminate or minimize the contaminant source in the future.

To be most effective, the personnel conducting the visual examination should be fully knowledgeable about the storm water pollution prevention plan, the sources of contaminants on the site, the industrial activities conducted exposed to storm water and the day to day operations that may cause unexpected pollutant releases.

If the visual examination results in an observation of floating solids, the personnel should carefully examine the solids to see if they are raw materials, waste materials or other known products stored or used at the site. If an unusual color or odor is sensed, the personnel should attempt to compare the color or odor to the colors or odors of known chemicals and other materials used at the facility. If the examination reveals a large amount of settled solids, the personnel may check for unpaved, unstabilized areas or areas of erosion. If the examination results in a cloudy sample that is very slow to settle-out, the personnel should evaluate the site draining to the discharge point for fine particulate material, such as dust, ash, or other pulverized, ground, or powdered chemicals.

If the visual examination results in a clean and clear sample of the storm water discharge, this may indicate that no visible pollutants are present. This would be a indication of a high quality result, however, the visual examination will not provide information about dissolved contamination. If the facility is in a sector or subsector required to conduct analytical (chemical) monitoring, the results of the chemical monitoring, if conducted on the same sample, would help to identify the presence of any dissolved pollutants and the ultimate effectiveness of the pollution prevention plan. If the facility is not required to conduct benchmark monitoring, it may do so if it chooses to confirm the cleanliness of the sample.

While conducting the visual examinations, personnel should constantly be attempting to relate any contamination that is observed in the samples to the sources of pollutants on site. When contamination is observed, the personnel should be evaluating whether or not additional BMPs should be implemented in the pollution prevention plan to address the observed contaminant, and if BMPs have already been implemented, evaluating whether or not these are working correctly or need maintenance. Permittees may also conduct more frequent visual

examinations than the minimum quarterly requirement, if they so choose. By doing so, they may improve their ability to ascertain the effectiveness of their plan. Using this guidance, and employing a strong knowledge of the facility operations, permittees should be able to maximize the effectiveness of their storm water pollution prevention efforts through conducting visual examinations which give direct, frequent feedback to the facility operator or pollution prevention team on the quality of the storm water discharge.

b. Benchmark monitoring requirements. Certain industrial sectors are required to conduct monitoring of their storm water discharges associated with industrial activity for pollutants of concern. In some cases, the monitoring is applicable only to a subsector rather than the entire industrial sector. Benchmark monitoring requirements involve laboratory chemical analyses of samples collected by the permittee. Table 2 lists the industrial sectors, or subsectors, required to perform benchmark monitoring and the associated parameters.

TABLE 2. INDUSTRIAL SECTORS SUBJECT TO BENCHMARK MONITORING.		
Industry Sector	Industry Sub-sector	Benchmark Monitoring Parameters
A	General Sawmills and Planing Mills	TSS.
	Wood Preserving Facilities	Arsenic, Chromium, Copper.
	Log Storage and Handling	TSS.
	Hardwood Dimension and Flooring Mills	TSS.
B	Paperboard Mills	BOD.
C	Industrial Inorganic Chemicals	Aluminum, Iron, Total N.
	Plastics, Synthetic Resins, etc.	Zinc.
	Soaps, Detergents, Cosmetics, Perfumes	Total N, Zinc.
	Agricultural Chemicals	Total N, Iron, Zinc, Phosphorus.
D	Asphalt Paving and Roofing Materials	TSS.
E	Clay Products	Aluminum.
	Lime and Gypsum Products	TSS, pH, Iron.
F	Steel Works, Blast Furnaces, and Rolling and Finishing Mills	Aluminum, Zinc.
	Iron and Steel Foundries	Aluminum, TSS, Copper, Iron, Zinc.
	Nonferrous Rolling and Drawing	Copper, Zinc.
	Nonferrous Foundries (Castings)	Copper, Zinc.
G <sup>2</sup>	Copper Ore Mining and Dressing	TSS
H	Coal Mines and Coal-Mining Related Facilities	TSS, Aluminum, Iron
K	Hazardous Waste Treatment, Storage or Disposal	TKN, TSS, TOC, Arsenic, Cadmium, Cyanide, Lead, Mercury, Selenium, Silver.
L	Landfills, Land Application Sites, and Open Dumps	Iron, TSS.
M	Automobile Salvage Yards	TSS, Aluminum, Iron, Lead.
N	Scrap Recycling and Waste Recycling Facilities	Aluminum, Cadmium, Chromium, Copper, Iron, Lead, Zinc, TSS.
	Ship Dismantling, Marine Salvaging and Marine Wrecking	Aluminum, Cadmium, Chromium, Copper, Iron, Lead, Zinc, TSS.
O	Steam Electric Generating Facilities	Iron.

P	Land Transportation and Warehousing	TPH, TSS.
Q	Water Transportation Facilities	Aluminum, Iron, Zinc.
R	Ship and Boat Building or Repairing Yards	TSS.
S	Airports with deicing activities <sup>3</sup>	BOD, TKN, pH, COD, TSS.
U	Dairy Products.	BOD, TSS.
	Grain Mill Products	TSS, TKN.
	Fats and Oils	BOD, Total N, TSS.
Y	Rubber Products	Zinc.
Z	Leather Tanning and Finishing	TKN.
AA	Fabricated Metal Products Except Coating	Iron, Aluminum, Zinc.
	Fabricated Metal Coating and Engraving	Zinc.
AD	Non-classified Facilities/Storm Water Discharges Designated By the Board As Requiring Permits	TSS.

<sup>1</sup> Table does not include parameters for compliance monitoring under effluent limitations guidelines.

<sup>2</sup> See Sector G (Part IV G) for additional monitoring discharges from waste rock and overburden piles from active ore mining or dressing facilities, inactive ore mining or dressing facilities, and sites undergoing reclamation.

<sup>3</sup> Monitoring requirement is for airports with deicing activities that utilize more than 100 tons of urea or more than 100,000 gallons of glycol per year.

Benchmark monitoring samples must be taken at least during the first two, and potentially all, of the monitoring periods after the facility is granted coverage under the permit, unless the facility is granted a waiver. The monitoring periods are as follows: (1) July 1, 2009 to December 31, 2009; (2) January 1, 2010 to December 31, 2010; (3) January 1, 2011 to December 31, 2011; (4) January 1, 2012 to December 31, 2012; and (5) January 1, 2013 to December 31, 2013.

Grab samples are to be collected from the discharge resulting from a storm event that results in an actual discharge from the site (defined as a "measurable" storm event), providing the interval from the preceding measurable storm event is at least 72 hours. The 72-hour storm interval is waived if the permittee can document that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample must be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger must submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. A minimum of one grab is required. Where the discharge to be sampled contains both storm water and non-storm water, the facility is required to sample the storm water component of the discharge at a point upstream of the location where the non-storm water mixes with the storm water, if practicable. In addition to the analytical results, permittees are required to provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; and the duration between the storm event sampled and the end of the previous measurable storm event.

This permit requires benchmark analytical monitoring for discharges from certain classes of industrial facilities. Industries may reduce the level of pollutants in storm water runoff from their sites through the development and proper implementation of a storm water pollution prevention plan. Benchmark monitoring is a means by which to measure the concentration of a pollutant in a storm water discharge. Because these pollutants have been reported at or above benchmark levels, DEQ is requiring monitoring after the pollution prevention plan has



been implemented to assess the effectiveness of the pollution prevention plan and to help ensure that a reduction of pollutants is realized. Analytical results are quantitative and therefore can be used to compare results from discharge to discharge and to quantify the improvement in storm water quality attributable to the storm water pollution prevention plan, or to identify a pollutant that is not being successfully controlled by the plan. The results of the benchmark monitoring are not intended to be used to evaluate actual or potential exceedances of instream water quality criteria. This permit only requires benchmark monitoring for the industry sectors or subsectors that demonstrated a potential to discharge pollutants at concentrations of concern.

To determine the industry sectors and subsectors that would be subject to benchmark monitoring requirements contained in the general permit, DEQ relied primarily upon the fact sheet prepared for the 1995 EPA MSGP (60 FR 50804), and the fact sheet for EPA's final 2008 MSGP (available on EPA's web site at <http://cfpub2.epa.gov/npdes/stormwater/msgp.cfm>). In developing their 1995 MSGP, EPA reviewed the data submitted in accordance with the 1990 group storm water permit application process. EPA established "benchmark" concentrations for the pollutant parameters on which monitoring results had been received. EPA continued those benchmark requirements for their 2000 MSGP. For the 2008 MSGP, EPA undertook an analysis of the monitoring requirements of the 2000 MSGP that included: how effective existing controls on these discharges have been based on the history of discharge monitoring data; Toxics Release Inventory (TRI) data; and results and conclusions from the University of California Los Angeles Final Report, *Industrial Storm Water Monitoring Program Existing Statewide Permit Utility and Proposed Modifications*. One of the primary purposes of these analyses was to determine if elimination of, or modification or addition to, benchmark monitoring requirements was warranted. This information helped EPA identify potential pollutants that may be present in the storm water discharges.

"Benchmarks" are the pollutant concentrations above which EPA determined represents a level of concern. The level of concern is a concentration at which a storm water discharge could potentially impair, or contribute to impairing water quality or affect human health from ingestion of water or fish. The benchmarks are also viewed by EPA as a level below which there is little potential for water quality concern. As such, the benchmarks also provide an appropriate level to determine whether a facility's storm water pollution prevention measures are successfully implemented. The benchmark concentrations are not effluent limitations and should not be interpreted as such. These values are merely levels which EPA has used to determine if a storm water discharge from any given facility merits further monitoring to insure that the facility has been successful in implementing a storm water pollution prevention plan. As such these levels represent a target concentration for a facility to achieve through implementation of pollution prevention measures at the facility. Based on an evaluation of the EPA fact sheet for the 1995, 2000 and 2008 MSGPs, and the industrial sector-specific analytical monitoring requirements, DEQ added benchmark values for three additional parameters: total organic carbon; total Kjeldahl nitrogen, and total petroleum hydrocarbons. DEQ also combined the parameter "total Kjeldahl nitrogen" with "nitrate plus nitrite as nitrogen" to form the "total nitrogen" parameter. Table 3 lists the parameter benchmark values.

TABLE 3. PARAMETER BENCHMARK VALUES		
Parameter Name	Benchmark Level	Source
Biochemical Oxygen Demand (5 day)	30 mg/L	5
Chemical Oxygen Demand	120 mg/L	6
Total Suspended Solids	100 mg/L	8

Turbidity	50 NTU	10
Nitrate + Nitrite Nitrogen	0.68 mg/L	8
Total Phosphorus	2.0 mg/L	7
pH	6.0-9.0 s.u.	5
Total Kjeldahl Nitrogen (added by DEQ)	1.5 mg/L	8
Total Nitrogen (added by DEQ)	2.2 mg/L	8
Total Organic Carbon (added by DEQ)	110 mg/L	12
Total Petroleum Hydrocarbons (added by DEQ)	15 mg/L	11
Aluminum, Total (pH 6.5-9)	0.75 mg/L	1
Ammonia	19 mg/L	1
Antimony, Total	0.64 mg/L	4
Arsenic, Total (c)	0.15 mg/L	2
Beryllium, Total (c)	0.13 mg/L	3
Cadmium, Total (H)	0.0021 mg/L	1
Chromium, Total	1.8 mg/L	1
Copper, Total (H)	0.014 mg/L	1
Cyanide	0.022 mg/L	1
Iron, Total	1.0 mg/L	2
Lead, Total (H)	0.082 mg/L	1
Manganese	0.064 mg/L	9
Mercury, Total	0.0014 mg/L	1
Nickel, Total (H)	0.47 mg/L	1
Phenols	0.016 mg/L	9
Selenium, Total (*)	0.005 mg/L	2
Silver, Total (H)	0.0038 mg/L	1
Zinc, Total (H)	0.12 mg/L	1

Sources

1. "EPA Recommended Ambient Water Quality Criteria." Acute Aquatic Life Freshwater (EPA-822-R-02-047 November 2002-CMC)
2. "EPA-Recommended Ambient Water Quality Criteria." Chronic Aquatic Life Freshwater (EPA-822-R-02-047 November 2002-CCC)
3. "EPA Recommended Ambient Water Quality Criteria for Beryllium." LOEL Acute Freshwater (EPA-440-5-80-024 October 1980)
4. "EPA Recommended Ambient Water Quality Criteria" Human Health For the Consumption of Organism Only (EPA-822-R-02-047 November 2002)
5. Secondary Treatment Regulations (40 CFR 133)
6. Factor of 4 times BOD<sub>5</sub> concentration - North Carolina benchmark
7. North Carolina storm water benchmark derived from NC Water Quality Standards
8. National Urban Runoff Program (NURP) median concentration
9. Minimum Level (ML) based upon highest Method Detection Limit (MDL) times a factor of 3.18
10. Combination of simplified variations on *Stormwater Effects Handbook*, Burton and Pitt, 2001 and water quality standards in Idaho, in conjunction with review of DMR data.
11. Discharge limitations and compliance data
12. Median concentration of Storm Water Effluent Limitation Guideline (40 CFR Part 419)

Notes:

(\*) Limit established for oil and gas exploration and production facilities only.

(c) carcinogen  
(H) hardness dependent  
(PAR) Polynuclear Aromatic Hydrocarbon  
Assumptions:  
Receiving water temperature - 20 C  
Receiving water pH - 7.8  
Receiving water hardness CaCO<sub>3</sub> - 100 mg/L  
Receiving water salinity - 20 g/kg  
Acute to Chronic Ratio (ACR) - 10

As can be seen in Table 3, benchmark concentrations were determined based upon a number of existing standards or other sources to represent a level above which water quality concerns could arise. EPA also sought to develop values which can realistically be measured and achieved by industrial facilities. Moreover, storm water discharges with pollutant concentrations occurring below these levels would not warrant further analytical monitoring due to their de minimis potential effect on water quality.

The primary source of benchmark concentrations is EPA's National Water Quality Criteria, published in 1986 (often referred to as the "Gold Book"). For the majority of the benchmarks, EPA chose to use the acute aquatic life, fresh water ambient water quality criteria. These criteria represent maximum concentration values for a pollutant which, if exceeded, could cause acute effects on aquatic life such as mortality in a short period of time. Where acute criteria values were not available, EPA used the lowest observed effect level (LOEL) acute fresh water value. The LOEL values represent the lowest concentration of a pollutant that results in an adverse effect over a short period of time. These two acute freshwater values were selected as benchmark concentrations if the value was not below the approved method detection limit as listed in 40 CFR Part 136 and the value was not substantially above the concentration which EPA believes a facility can attain through the implementation of a storm water pollution prevention plan. These acute freshwater values best represent, on a national basis, the highest concentrations at which typical fresh water species can survive exposures of pollutants for short durations (i.e., a storm discharge event).

Acute freshwater criteria do not exist for a number of parameters on which EPA received data. For these parameters, EPA selected benchmark values from several other references. The benchmark concentrations for five day biochemical oxygen demand (BOD<sub>5</sub>) and for pH are determined based upon the secondary wastewater treatment regulations (40 CFR 133.102). EPA believes that the BOD<sub>5</sub> value of 30 mg/L is a reasonable concentration below which adverse effects in receiving waters under wet weather flow conditions should not occur. EPA also believes, that given group application data on BOD<sub>5</sub>, this value should be readily achievable by industrial storm water dischargers. The benchmark value for pH is a range of 6.0-9.0 standard units. EPA believes this level, given the group application data, is reasonably achievable by industrial storm water dischargers and represents an acceptable range within which aquatic life impacts will not occur. The benchmark concentration for chemical oxygen demand (COD) is based upon the State of North Carolina benchmark values for storm water discharges, and is a factor of four times the BOD<sub>5</sub> benchmark concentration. EPA has concluded that COD is generally discharged in domestic wastewater at four times the concentration of BOD<sub>5</sub> without causing adverse impacts on aquatic life. EPA selected the median concentration from the National Urban Runoff Program as the benchmark for total suspended solids (TSS), total Kjeldahl nitrogen (TKN) (DEQ) and for nitrate plus nitrite as nitrogen. DEQ combined the benchmarks for TKN and nitrate plus nitrite as nitrogen to come up with a benchmark for total nitrogen (DEQ). EPA believes the median concentration, which is the mid-point concentration (half the samples are above this level and half are below) represents concentration above which water quality concerns may result. For TSS a value of 100 mg/L is similar to the storm water benchmark used by North Carolina for storm water permits, and given the group application data, should be readily achievable by industry with

implementation of BMPs, many of which are designed for the purpose of controlling TSS. EPA also believes, given the group application data, that there is a relationship between TSS and the amount of exposed industrial activity and that industrial activities even in arid western States should be able to implement BMPs that will accomplish this benchmark. EPA selected the storm water effluent limitation guideline for petroleum refining facilities as the benchmark for oil and grease and total organic carbon, and DEQ also used the oil and grease value for the total petroleum hydrocarbon benchmark. Given the lack of an acute criteria, EPA selected the chronic fresh water quality criteria as the benchmark for iron. Water quality criteria for waterbodies in the State of North Carolina were used to determine benchmarks for total phosphorus and for fluoride. The concentration value for phosphorus was designed to prevent eutrophication of fresh waterbodies from storm water runoff. The fluoride value was designed by North Carolina to be protective of water quality, as was the manganese value developed by Colorado. EPA believes that each of these benchmark values represents a reasonable level below which water quality impacts should not occur and they therefore represent a useful level to assess whether a pollution prevention plan is controlling pollution in storm water discharges.

For several other parameters, EPA chose benchmark values based on numerical adjustments of the acute fresh water quality criteria. Where the acute water quality criterion was below the method detection level for a pollutant, EPA used the "minimum level" (ML) as the benchmark concentration to ensure that the benchmark levels could be measured by permittees. For a few pollutants minimum levels have been published and these were used. For other pollutants, minimum levels needed to be calculated. EPA calculated the minimum levels using the methodology described in the draft "National Guidance for the Permitting, Monitoring, and Enforcement of Water Quality-based Effluent Limitations Set Below Analytical Detection/Quantitation Levels" (Michael Cook, OWEC, March 18, 1994).

Additionally, several organic compounds (ethylbenzene, fluoranthene, toluene, and trichloroethylene) have acute fresh water quality criteria at concentrations much higher than criteria developed for the protection of human health when ingesting water or fish. In addition, trichloroethylene is a human carcinogen. Therefore, EPA selected the human health criteria as benchmarks for these parameters. For dimethyl phthalate and total phenols, EPA selected benchmark concentrations based upon existing discharge limitations and compliance data (no industry had median concentrations above the selected benchmark for these parameters and therefore no industry sector is required to monitor for these two pollutants).

EPA conducted statistical analyses of the group Part 2 data for each parameter within every industry sector or subsector listed in Table 3. EPA prepared a statistical analysis of the sampling data for each pollutant parameter reported within each sector or subsector. (Only where EPA did not subdivide an industry sector into subsectors was an analysis of the entire sector's data performed.) The statistical analysis was performed assuming a delta log normal distribution of the sampling data within each sector/subsector. The analyses calculated median, mean, maximum, minimum, 95th, and 99th percentile concentrations for each parameter. The results of the analyses may be found in the appropriate section of Part VIII of EPA's 1995 MSGP fact sheet. From this analysis, EPA was able to identify pollutants for further evaluation within each sector or subsector.

EPA next compared the median concentration for each pollutant for each sector or subsector to the benchmark concentrations listed in Table 3. EPA also compared the other statistical results to the benchmarks to better ascertain the magnitude and range of the discharge concentrations to help identify the pollutants of concern. EPA did not conduct this analysis if a sector had data for a pollutant from less than three individual facilities. Under these circumstances, the sector or subsector would not have this pollutant identified as a pollutant of concern. This was done to ensure that a reasonable number of facilities represented the

industry sector or subsector as a whole and that the analysis did not rely on data from only one facility.

Further evaluation of the EPA fact sheet by DEQ has resulted in slight modifications to the benchmark monitoring requirements recommended by EPA. This is most notable in the inclusion of the total Kjeldahl nitrogen and total organic carbon parameters in certain industrial sectors which had median values above the benchmark set by DEQ (Table 3).

In preparation of the 1999 ISWGP fact sheet, DEQ conducted a supplemental analysis of the information presented in the EPA 1995 MSGP fact sheet. For each industry sector or subsector, parameters with a median concentration higher than the EPA benchmark level were considered pollutants of concern for the industry and identified as potential pollutants for analytical monitoring under this permit. DEQ then established its own benchmark concentration values for the pollutants of concern. The levels are set at concentrations that are more specific to permits in Virginia than are those in the 1995 EPA fact sheet. Certain values for metals have been converted from mg/L to µg/L and rounded to two significant digits. The parameters, the benchmark concentration values and the sources from which they are derived are listed in Table 4. The benchmark concentration values are all at or above levels of quantification that are attainable using EPA approved analytical methods.

TABLE 4. BENCHMARK MONITORING CONCENTRATION VALUES		
Effluent Parameter	Benchmark Concentration	Source
Biochemical Oxygen Demand (5 day)	30 mg/L	1
pH	within the range 6.0-9.0 s.u.	1
Total Suspended Solids	100 mg/L	2
Total Kjeldahl Nitrogen	1.5 mg/L	2
Total Nitrogen	2.2 mg/L	2
Total Organic Carbon	110 mg/L	3
Total Phosphorus	2 mg/L	4
Aluminum	750 µg/L	5
Arsenic	50 µg/L	6
Chromium	16 µg/L	6
Copper	18 µg/L	6
Cyanide	22 µg/L	6
Iron	1.0 mg/L	5
Lead	120 µg/L	6
Zinc	120 µg/L	6

Note: Metals are to be analyzed as total recoverable.

Sources used by DEQ to establish analytical monitoring benchmark concentration values:

1. Secondary Treatment Regulations (40 CFR 133)
2. National Urban Runoff Program (NURP) median concentration
3. Median concentration of Storm Water Effluent Limitation Guideline (40 CFR Part 419)
4. Virginia policy for Nutrient Enriched Waters, 9 VAC 25-40-10 et seq.
5. "EPA Recommended Ambient Water Quality Criteria." Aquatic Life Freshwater
6. Virginia Water Quality Standards, 9 VAC 25-260-140

DEQ then analyzed the list of potential pollutants to be monitored against the lists of significant materials exposed and industrial activities which occur within each industry sector or subsector as described in the EPA fact sheet information. Where DEQ could identify a source of a

potential pollutant which is directly related to industrial activities of the industry sector or subsector, the permit identifies that parameter for analytical monitoring. If DEQ could not identify a source of a potential pollutant which was associated with the sector/sub-sector's industrial activity, the permit does not require monitoring for the pollutant in that sector/subsector. Industries with no pollutants for which the median concentrations are higher than the benchmark levels are not required to perform analytical monitoring under this permit, with the exceptions explained below.

When the DEQ benchmark concentration values were used to screen the group application data in the EPA fact sheet, several changes were made. The median values for lead at agricultural chemical manufacturing facilities and at water transportation facilities were below the DEQ benchmark concentration value. Therefore, these industrial sectors will not be required to monitor for lead. Data from the scrap recycling and waste recycling facilities indicated that cadmium and chromium may be present in discharges at levels above the DEQ benchmark concentration values. These two parameters were added to the monitoring requirements for that industry. Monitoring for pH was added to the concrete and gypsum subsector due to the nature of the industrial activity and the potential for high pH storm water discharges.

DEQ also dropped monitoring for chemical oxygen demand in all industrial sectors (except air transportation facilities - sector S) because it is not an effective indicator parameter for the oxygen demand that effluents exert on receiving waters. Where EPA had required COD monitoring, DEQ substituted BOD<sub>5</sub> (for paperboard mills) or TOC (at hazardous waste facilities), or deleted the requirement.

In addition to the sectors and subsectors identified for benchmark monitoring using the methods described above, DEQ determined, based upon a review of the degree of exposure, types of materials exposed, special studies and in some cases inadequate sampling data in the EPA group applications, that industries in the following sections of this fact sheet also warrant analytical monitoring notwithstanding the absence of data on the presence or absence of certain pollutants in the group applications: hazardous waste treatment storage and disposal facilities, and airports which use more than 100,000 gallons per year of glycol-based fluids or 100 tons of urea for deicing. These industries are required to perform analytical monitoring under the permit due to the high potential for contamination of storm water discharges, which was not adequately characterized by group applicants in the information they provided in the EPA group application process.

c. Compliance Monitoring for Facilities Subject to Numeric Effluent Limitations. Four types of compliance monitoring have been identified in the permit: (1) facilities subject to storm water effluent limitation guidelines; (2) coal pile runoff monitoring; (3) facilities discharging to impaired waters with a Board established and EPA approved TMDL waste load allocation; and (4) facilities discharging to impaired waters without a Board established and EPA approved TMDL waste load allocation.

(1) Facilities Subject to Storm Water Effluent Limitation Guidelines. Compliance monitoring requirements are imposed under this permit to ensure that discharges subject to numerical effluent limitations under the storm water effluent limitations guidelines are in compliance with those limitations. Seven types of storm water discharges subject to effluent limitation guidelines may be covered under this general permit. These discharges include contaminated storm water runoff from timber products facilities, phosphate fertilizer manufacturing facilities, runoff associated with asphalt paving or roofing emulsion production, runoff from material storage piles at cement manufacturing facilities, contaminated runoff from hazardous waste landfills, contaminated runoff from municipal solid waste landfills, and coal pile runoff at steam electric generating facilities. Effluent limitations are listed in the Sector-specific Permit Requirements section of the permit.

These limitations are required under the VPDES permit regulation, 9 VAC 25-31-220 A, and EPA's storm water effluent limitation guidelines in the Code of Federal Regulations at 40 CFR Part 429, Part 418, Part 443, Part 411, Part 445 Subparts A and B, and Part 423. The effluent limitations for the seven discharge categories are listed in Table 5.

TABLE 5. NUMERIC EFFLUENT LIMITATIONS			
Industrial Sector	Parameter	Effluent Limitation	
<b>Coal Pile Runoff</b> Coal pile runoff at any covered facility (40 CFR Part 423).	Total Suspended Solids (TSS)	50 mg/l, max	
	pH	6.0 - 9.0 min. and max.	
<b>Sector A - Timber Products</b> Wet Decking Discharges at Log Storage and Handling Areas (40 CFR Part 429 Subpart I) (SIC 2411).	pH	6.0 - 9.0 s.u.	
	Debris (woody material such as bark, twigs, branches, heartwood, or sapwood)	No discharge of debris that will not pass through a 2.54 cm (1") diameter round opening.	
<b>Sector C - Chemical and Allied Products Manufacturing</b> Phosphate Subcategory of the Fertilizer Manufacturing Point Source Category (40 CFR 418.10) (SIC 2874).	Total Phosphorus (as P)	105 mg/L, Daily Maximum	35 mg/L, 30-day Average
	Fluoride	75 mg/L, Daily Maximum	25 mg/L, 30-day Average
<b>Sector D - Asphalt Paving and Roofing Materials</b> Discharges from areas where production of asphalt paving and roofing emulsions occurs (40 CFR Part 443 Subpart A) (SIC 2951, 2952).	Total Suspended Solids (TSS)	23 mg/L, Daily Maximum	15 mg/L, 30-day Average
	Oil and Grease	15 mg/L, Daily Maximum	10 mg/L, 30-day Average
	pH	6.0 - 9.0 s.u.	
<b>Sector E - Glass, Clay, Cement, Concrete and Gypsum Products</b> Cement Manufacturing Facility, Material Storage Run-off (40 CFR Part 411 Subpart C).	Total Suspended Solids (TSS)	50 mg/L, Daily Maximum	
	pH	6.0 - 9.0 s.u.	
<b>Sector K - Hazardous Waste TSD Facilities</b> Hazardous Waste Treatment, Storage, or Disposal Facilities (Industrial Activity Code "HZ") Subject to the Provisions of 40 CFR Part 445 Subpart A.	Biochemical Oxygen Demand (BOD <sub>5</sub> )	Maximum Daily	Max. Monthly Ave.
		220 mg/L	56 mg/L
	Total Suspended Solids (TSS)	88 mg/L	27 mg/L
	Ammonia	10 mg/L	4.9 mg/L
	Alpha Terpineol	0.042 mg/L	0.019 mg/L
	Aniline	0.024 mg/L	0.015 mg/L
	Benzoic Acid	0.119 mg/L	0.073 mg/L
	Naphthalene	0.059 mg/L	0.022 mg/L
	p-Cresol	0.024 mg/L	0.015 mg/L
	Phenol	0.048 mg/L	0.029 mg/L
	Pyridine	0.072 mg/L	0.025 mg/L
	Arsenic (Total)	1.1 mg/L	0.54 mg/L
	Chromium (Total)	1.1 mg/L	0.46 mg/L
	Zinc (Total)	0.535 mg/L	0.296 mg/L
	pH	Within the range of 6.0 - 9.0 s.u.	

<b>Sector L - Landfills</b> Landfills (Industrial Activity Code "LF") Which Are Subject to the Requirements of 40 CFR Part 445 Subpart B.		Maximum Daily	Max. Monthly Ave.
	Biochemical Oxygen Demand (BOD <sub>5</sub> )	140 mg/L	37 mg/L
	Total Suspended Solids (TSS)	88 mg/L	27 mg/L
	Ammonia	10 mg/L	4.9 mg/L
	Alpha Terpineol	0.033 mg/L	0.016 mg/L
	Benzoic Acid	0.12 mg/L	0.071 mg/L
	p-Cresol	0.025 mg/L	0.014 mg/L
	Phenol	0.026 mg/L	0.015 mg/L
	Zinc (Total)	0.20 mg/L	0.11 mg/L
	pH	Within the range of 6.0 - 9.0 s.u.	

Compliance monitoring must be performed at least once during each of the monitoring periods after the facility is granted coverage under the permit. The monitoring periods are as follows: (1) July 1, 2009 to December 31, 2009; (2) January 1, 2010 to December 31, 2010; (3) January 1, 2011 to December 31, 2011; (4) January 1, 2012 to December 31, 2012; and (5) January 1, 2013 to December 31, 2013.

All samples are to be grab samples taken within the first 30 minutes of discharge where practicable, but in no case later than the first hour of discharge. The samples are to be taken from the discharges subject to the numeric effluent limitations prior to mixing with other discharges. Discharges covered under this permit which are subject to numeric effluent limitations are not eligible for the low concentration, alternative certification or representative discharges sampling waiver provisions of the permit.

In addition to the analytical results, permittees are required to provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; and the duration between the storm event sampled and the end of the previous measurable storm event.

(2) Coal Pile Runoff Monitoring. This permit establishes effluent limitations of 50 mg/L total suspended solids and a pH range of 6.0-9.0 for coal pile runoff. Any untreated overflow from facilities designed, constructed, and operated to treat the volume of coal pile runoff associated with a 10-year, 24-hour rainfall event is not subject to the 50 mg/L limitation for total suspended solids. The permit extends these effluent limitations to all industrial operations that discharge coal pile runoff, where the coal pile runoff can be defined as a storm water discharge associated with industrial activity (i.e., at a plant in one of the industrial sectors listed in Table 1). DEQ has adopted these technology-based pH limitations in this general permit in accordance with setting limits on a case-by-case basis as allowed under 9 VAC 25-31-220 A. These case-by-case limits are derived by transferring the known achievable technology from an effluent guideline to a similar type of discharge. When developing these technology-based limitations, variables such as rainfall pH, sizes of coal piles, pollutant characteristics, and runoff volume were considered. Therefore, these variables need not be considered again. As discussed above, these pH limitations are technology-based and are not based on water quality. Facilities must comply with these limitations upon submittal of the registration statement. Facilities with treatment works for coal pile runoff are expected to meet the limitations.

Monitoring must be performed at least once during each of the monitoring periods after the facility is granted coverage under the permit. The monitoring periods are as follows: (1) July 1, 2009 to December 31, 2009; (2) January 1, 2010 to December 31, 2010; (3)



January 1, 2011 to December 31, 2011; (4) January 1, 2012 to December 31, 2012; and (5) January 1, 2013 to December 31, 2013.

All samples are to be grab samples taken within the first 30 minutes of discharge where practicable, but in no case later than the first hour of discharge. The samples are to be taken from the discharges subject to the numeric effluent limitations prior to mixing with other discharges. Discharges covered under this permit which are subject to numeric effluent limitations are not eligible for the low concentration, alternative certification or representative discharges sampling waiver provisions of the permit.

In addition to the analytical results, permittees are required to provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; and the duration between the storm event sampled and the end of the previous measurable storm event.

(3) Facilities Discharging to Impaired Waters with a Board Established and EPA Approved TMDL Waste Load Allocation. New monitoring requirements for facilities subject to TMDL wasteload allocations have been added to this permit to ensure that discharges are in compliance with those allocations. DEQ will notify facilities in writing that they are subject to a TMDL wasteload allocation and that they are required to monitor their discharges for the pollutant of concern to evaluate compliance with the TMDL allocation. Monitoring must be performed at least semiannually (twice per year), and the monitoring periods are from July 1 to December 31, and January 1 to June 30.

All samples are to be grab samples taken within the first 30 minutes of discharge where practicable, but in no case later than the first hour of discharge. The samples are to be taken from the discharges subject to the waste load allocation prior to mixing with other discharges. In addition to the analytical results, permittees are required to provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; and the duration between the storm event sampled and the end of the previous measurable storm event.

If the pollutant subject to the TMDL waste load allocation is not detected in any of the samples from the first four monitoring periods (i.e., the first two years of coverage under the permit), the permittee may request to the Department in writing that further sampling be discontinued, unless the TMDL has specific instructions to the contrary (in which case those instructions shall be followed).

If the pollutant subject to the TMDL waste load allocation is detected in any of the samples from the first four monitoring periods, the permittee must continue the scheduled TMDL monitoring throughout the term of the permit.

(4) Facilities Discharging to Impaired Waters without a Board Established and EPA Approved TMDL Waste Load Allocation. New monitoring requirements for facilities discharging to impaired waters without a Board established and EPA approved TMDL waste load allocation have been added to this permit to ensure that the facility is not causing or contributing to the water quality impairment. DEQ will notify facilities in writing that they are subject to the impaired waters monitoring, and that they are required to monitor their discharges for the pollutants that are causing the impairment. Monitoring must be performed at least once during each of the monitoring periods after the facility is granted coverage under the permit. The monitoring periods are as follows: (1) July 1, 2009 to December 31, 2009; (2) January 1, 2010 to December 31, 2010; (3) January 1, 2011 to December 31, 2011; (4) January 1, 2012 to December 31, 2012; and (5) January 1, 2013 to December 31, 2013.

All samples are to be grab samples taken within the first 30 minutes of discharge where practicable, but in no case later than the first hour of discharge. The samples are to be

taken from the facility's storm water discharges prior to mixing with other discharges. In addition to the analytical results, permittees are required to provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; and the duration between the storm event sampled and the end of the previous measurable storm event.

If the pollutant for which the waterbody is impaired is suspended solids, turbidity or sediment/sedimentation, the permittee must monitor for Total Suspended Solids (TSS). If the pollutant for which the waterbody is impaired is expressed in the form of an indicator or surrogate pollutant, the permittee must monitor for that indicator or surrogate pollutant. No monitoring is required when a waterbody's biological communities are impaired but no pollutant, including indicator or surrogate pollutants, is specified as causing the impairment, or when a waterbody's impairment is related to hydrologic modifications, impaired hydrology, or temperature.

If the pollutant for which the water is impaired is not present in the discharges from the facility, or it is present but its presence is caused solely by natural background sources, the permittee can include a notification to this effect in the first DMR submitted by the facility, after which the impaired water monitoring may be discontinued. To support a determination that the pollutant's presence is caused solely by natural background sources, the permittee must keep the following documentation with the SWPPP: (i) an explanation of why the permittee believed that the presence of the impairment pollutant in the facility's discharge is not related to the activities at the facility; and (ii) data or studies that tie the presence of the impairment pollutant in the facility's discharge to natural background sources in the watershed. Natural background pollutants include those substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from earlier activity at the facility's site, or pollutants in run-on from neighboring sources which are not naturally occurring.

## 2. Monitoring Waivers/Reporting Monitoring Results/Record Keeping:

a. Monitoring Waivers: The general permit allows permittees to waive the benchmark monitoring requirement under certain circumstances. Permittees may waive the benchmark monitoring requirement on an outfall by outfall basis if they can demonstrate that all the concentrations for a pollutant in the discharge are at or below the pollutant-specific benchmark concentration values. If the permittee's monitoring data during two consecutive monitoring periods indicates pollutants are below the monitoring benchmark concentration values, then monitoring during the remaining permit monitoring periods may be waived. The exclusion from monitoring is conditional on the facility maintaining industrial operations and best management practices that will ensure a quality of storm water discharges consistent with the average concentrations recorded during the earlier monitoring period. For any benchmark monitoring waiver, the permittee must submit a waiver request to the Department, along with the supporting monitoring data, and a certification that there has not been a significant change in industrial activity or the pollution prevention measures in area of the facility that drains to the outfall for which the sampling waiver is requested.

Permittees may waive monitoring if adverse weather conditions make it unsafe or impossible to collect the sample.

Quarterly visual monitoring and benchmark monitoring may be waived if the industrial site is both inactive and unstaffed, provided there are no industrial materials or activities exposed to storm water. Also for quarterly visual monitoring and benchmark monitoring, permittees are allowed to sample one outfall as representative of other similar outfalls, provided the permittee can demonstrate that the outfalls are substantially identical.

In order to qualify for any of these sampling waivers, the permittee must submit a certification stating that the conditions required for the waiver were occurring at the time sampling was to have been conducted.

b. Reporting Monitoring Results: Permittees that are required to submit monitoring results to the Department must send reports to the DEQ regional office by the following dates: Effluent limitation monitoring, impaired water monitoring (other than TMDL waste load allocation monitoring) and benchmark monitoring are due by January 10<sup>th</sup> of each year of permit coverage; TMDL waste load allocation monitoring is due by January 10<sup>th</sup> and July 10<sup>th</sup> of each year of permit coverage. Follow-up monitoring (for corrective actions) is due 30 days after the results are received. Monitoring results are to be submitted on a Discharge Monitoring Report (DMR) form. For each outfall, one DMR form must be submitted per storm event sampled. The permittee must include a measurement or estimate of the total precipitation, and peak flow rate of runoff for each storm event sampled. All reports are to be submitted to the DEQ regional office that issued the general permit coverage.

Permittees are not required to submit records of the visual examinations of storm water discharges unless specifically asked to do so by DEQ. Records of the visual examinations must be maintained at the facility. Records of visual examination of storm water discharge need not be lengthy. Permittees may prepare typed or hand written reports using forms or tables which they may develop for their facility. The report need only document: the date and time of the examination; the name of the individual making the examination; and any observations of color, odor, clarity, floating solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution.

c. Record Keeping: This permit requires permittees to retain all permit related records for a minimum of 3 years from the date that coverage under this permit expires or is terminated.

3. Corrective Actions. A new requirement has been added to the permit for corrective actions the permittee must take if benchmark monitoring concentration values are exceeded, if inspections turn up a deficiency at the facility, or if there is an exceedance of effluent limitations, TMDL waste load allocations, or a water quality standard. The corrective action section stipulates time limits for implementing actions to remedy deficiencies. It should be emphasized that these time frames are not grace periods within which an operator is relieved of any liability for a permit violation. If the original inadequacy constitutes a permit violation, then that violation is not deferred by the time frame the permit has allotted for corrective action. The time limits are those that DEQ considers reasonable for making the necessary repairs or modifications, and are included specifically so that inadequacies are not allowed to persist indefinitely. Failure to take the necessary corrective action within the stipulated time limit could constitute an additional and independent permit violation.

a. Data exceeding benchmarks concentration values. If benchmark monitoring results exceed the benchmark concentration value for a parameter, the permittee must review the SWPPP and modify it to address any deficiencies which caused the exceedance. The permittee must make revisions to the SWPPP within 30 days after an exceedance is discovered, and when BMPs need to be modified or added, the permittee must implement the changes before the next anticipated storm event if possible, but no later than 60 days after the exceedance is discovered.

If the concentration of a pollutant exceeds a benchmark concentration value, and the permittee determines that exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background, corrective action is not required provided that: (a) the concentration of the benchmark monitoring result is less than or equal to the concentration of that pollutant in the natural background; (b) the permittee documents and maintains with the SWPPP the supporting rationale for concluding that benchmark exceedances are in fact

attributable solely to natural background pollutant levels. The supporting rationale shall include any data previously collected by the facility or others (including literature studies) that describe the levels of natural background pollutants in the facility's storm water discharges; and (c) the permittee notifies the Department on the benchmark monitoring DMR that the benchmark exceedances are attributable solely to natural background pollutant levels. Natural background pollutants include those substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from earlier activity on the facility's site, or pollutants in run-on from neighboring sources which are not naturally occurring.

b. Corrective actions. The permittee must take corrective action whenever: (1) routine facility inspections, comprehensive site compliance evaluations, inspections by local, state or federal officials, or any other process, observation or event result in discovery of any deficiency; or (2) there is any exceedance of an effluent limitation (including coal pile runoff), TMDL wasteload allocation, or water quality standard.

The permittee must review the SWPPP and modify it as necessary to address any deficiencies. Revisions to the SWPPP must be completed within 30 days following the discovery of the deficiency. When BMPs need to be modified or added, implementation must be completed before the next anticipated storm event if possible, but no later than 60 days after the deficiency is discovered. All corrective actions taken must be documented and retained with the SWPPP.

c. Follow-up Monitoring and Reporting.

If at any time monitoring results indicate that discharges from the facility exceed an effluent limitation or a TMDL wasteload allocation, or that discharges from the facility are causing or contributing to an exceedance of a water quality standard, the permittee must take immediate steps to eliminate the exceedances. Within 30 calendar days of implementing the relevant corrective actions, or during the next qualifying runoff event, if one doesn't occur within 30 calendar days, follow-up monitoring must be performed to verify that the BMPs that were modified are effectively protecting water quality. The follow-up monitoring data must be submitted to DEQ no later than 30 days after the results are received. If the follow-up monitoring value does not exceed the effluent limitation or other relevant standard, no additional follow-up monitoring is required for this monitoring event. Should the follow-up monitoring indicate that the effluent limitation, TMDL wasteload allocation, water quality standard or other relevant standard is still being exceeded, the permittee must submit an Exceedance Report to DEQ no later than 30 days after the follow-up monitoring results are received. Additional follow-up monitoring must be continued at an appropriate frequency, but no less often than quarterly, until the discharge no longer exceeds the standard.

### Permit Special Conditions

1. Allowable Non-storm Water Discharges. This general permit does not authorize non-storm water discharges that are mixed with storm water except as provided below. The only non-storm water discharges that are intended to be authorized under this permit include discharges from fire fighting activities; fire hydrant flushings; potable water including water line flushings; uncontaminated air conditioning or compressor condensate (excluding air compressors); irrigation drainage; landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with manufacturer's instructions; pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed); routine external building wash down which does not use detergents; uncontaminated ground water or spring water; foundation or footing drains where flows are not contaminated with process materials such as solvents; incidental windblown mist from cooling

towers that collect on rooftops or adjacent portions of the facility, but NOT intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

These sources of non-storm water (except flows from fire fighting activities) must be identified in the storm water pollution prevention plan prepared for the facility. Where such discharges occur, the plan must also identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

This permit does not require pollution prevention measures to be identified and implemented for non-storm water flows from fire-fighting activities because these flows will generally be unplanned emergency situations where it is necessary to take immediate action to protect the public.

Where a storm water discharge is mixed with non-storm water that is not authorized by this general permit or another VPDES permit, the discharger should submit the appropriate application forms (Forms 1, 2C, and/or 2E) to obtain separate VPDES permit coverage of the non-storm water portion of the discharge.

2. Releases of Hazardous Substances or Oil. The permit prohibits discharges of oil and-hazardous substances from spills. The discharge of hazardous substances or oil from a facility must be eliminated or minimized in accordance with the storm water pollution prevention plan developed for the facility. If there is a discharge of a material in excess of a reportable quantity established under 40 CFR Parts 110, 117, or 302 the permittee must make a report to DEQ within 24 hours. The permittee must also notify the MS4 operator if the release enters an MS4. The pollution prevention plan for the facility must be reviewed and revised as necessary to prevent a reoccurrence of the spill. This does not relieve the permittee from any reporting to federal or state authorities required under 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 or § 62.1-44.34:19 of the Code of Virginia.

3. Co-located Industrial Activity. Where more than one regulated industrial activity occurs at the site, the permittee is required to implement the industry specific monitoring and pollution prevention requirements for all applicable industrial categories. Co-located industrial activities occur when activities being conducted onsite meet more than one of the industrial sector descriptions in the permit (e.g., a landfill at a wood treatment facility or a vehicle maintenance garage at an asphalt batching plant). Determination of which co-located activities require action is the responsibility of the permittee.

Authorizing co-located discharges allows industrial facilities to develop pollution prevention plans that fully address all industrial activities at the site. For example, if a wood treatment facility has a landfill, the pollution prevention plan requirements for the wood treatment facility will differ greatly from those needed for a landfill. Therefore, by authorizing co-located industrial activities, the wood treatment facility will develop a pollution prevention plan to meet the requirements addressing the storm water discharges from the wood treatment facility and the landfill. The facility is also subject to applicable monitoring requirements for each type of industrial activity as described in the applicable sections of the permit. By monitoring the discharges from the different industrial activities, the facility can better determine the effectiveness of the pollution prevention plan requirements for controlling storm water discharges from all activities.

4. Combined Discharges. The storm water discharges regulated by the permit may be combined with unregulated storm water provided that the combined effluent meets the requirements of the general permit.

5. Floating Solids or Visible Foam. The permit prohibits discharges of floating solids or visible foam in other than trace amounts. This is a standard requirement of all VPDES permits. It typically appears in Part I with the other effluent limitations rather than in the permit boilerplate described below.

6. Salt Storage Piles or Piles Containing Salt. This general permit contains special requirements for storm water discharges associated with industrial activity from facilities with salt storage piles or piles containing salt. These special requirements have been included in this permit based on human health and aquatic effects resulting from storm water runoff from salt storage piles compounded with the prevalence of salt storage piles in Virginia. Storage piles of salt used for deicing or other commercial or industrial purposes must be enclosed or covered to prevent exposure to precipitation, and permittees must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Facilities that collect all of the runoff from their salt piles and reuse it in their processes or discharge it subject to a separate VPDES permit do not need to enclose or cover their piles. All salt storage piles must be located on an impervious surface, and all runoff from the pile, and/or runoff that comes in contact with salt, including under drain systems, must be collected and contained within a bermed basin lined with concrete or other impermeable materials, or within an underground storage tank, or within an above ground storage tank, or disposed of through a sanitary sewer (with the permission of the treatment facility). A combination of any or all of these methods may be used. In no case is the salt contaminated stormwater allowed to be discharged directly to the ground or to state waters.

7. Discharges to Waters Subject to TMDL Wasteload Allocations. The permit requires facilities that are a source of the specified pollutant of concern to waters for which a TMDL wasteload allocation has been established by the Board and approved by EPA prior to the term of this permit to incorporate measures and controls into the SWPPP that are consistent with the assumptions and requirements of the TMDL. DEQ will notification the owner in writing that the facility is subject to the TMDL requirements. The facility's SWPPP needs to specifically address any conditions or requirements included in the TMDL that are applicable to discharges from the facility. If there is a specific numeric wasteload allocation established in the TMDL that applies to discharges from the facility, the owner has to perform any required monitoring in accordance with the permit requirements, and implement BMPs designed to meet that allocation.

8. Water Quality Protection. The permit requires that discharges authorized by the permit be controlled as necessary to meet applicable water quality standards. The permittee must employ an iterative, BMP-based program to select, install, implement and maintain BMPs at the facility designed to minimize pollutants in the storm water discharges, and to address any exceedance of any applicable water quality standard, effluent limitation, or TMDL waste load allocation. The Board expects that compliance with the conditions in this permit will control discharges as necessary to meet applicable water quality standards. If there is evidence indicating that the storm water discharges authorized by the permit are causing, have the reasonable potential to cause, or are contributing to an excursion above an applicable water quality standard, an excursion above a TMDL wasteload allocation, or are causing downstream pollution (as defined in § 62.1-44.3 of the Code of Virginia), the Board may require the permittee to take corrective action in accordance with the permit, and include and implement appropriate controls in the SWPPP to correct the problem, or may require the permittee to obtain an individual permit.

9. Adding/Deleting Storm Water Outfalls. The permit allows the permittee to add new and/or delete existing storm water outfalls at the facility as necessary or appropriate. The permittee has to update the SWPPP and notify DEQ of all outfall changes within 30 days of the change, and submit a copy of the updated SWPPP site map with their notification.

10. Antidegradation Requirements for New or Increased Discharges to High Quality Waters. Facilities that add new outfalls, or increase their discharges from existing outfalls that discharge directly to high quality waters designated under Virginia's water quality standards antidegradation policy may be notified by the Department that additional control measures, or other permit conditions are necessary to comply with the applicable antidegradation requirements, or may be notified that an individual permit is required.

### Conditions Applicable to All VPDES Permits

This general permit is a VPDES permit. As such, it is necessary to include certain conditions required by the VPDES Permit Regulation, 9 VAC 25-31. These conditions are included in all VPDES permits. With a few minor exceptions, the language is not modified to reflect their use in the general permit. Conditions in this section of the permit may not have direct application at all covered facilities.

### Storm Water Pollution Prevention Plans

The conditions of this permit have been designed to comply with the technology-based standards of the CWA (BAT/BCT). Based on a consideration of the appropriate factors for BAT and BCT requirements, the general permit lists a set of tailored requirements for developing and implementing storm water pollution prevention plans.

For discharges covered by the permit, other than those regulated by numeric effluent limitations, the permit conditions reflect DEQ's decision to identify a number of best management practices and traditional storm water management practices which prevent pollution in storm water discharges as the BAT/BCT level of control for the majority of storm water discharges covered by this permit. The permit conditions applicable to these discharges are not numeric effluent limitations, but rather are flexible requirements for developing and implementing site specific plans to minimize and control pollutants in storm water discharges associated with industrial activity. This approach is consistent with the approach used in the ISWGP issued on July 1, 2004. In addition, this general permit reflects information provided in the EPA MSGP issued October 30, 2000, and modified in the EPA final 2008 MSGP.

DEQ is authorized under 9 VAC 25-31-220 K to impose BMPs in lieu of numeric effluent limitations in VPDES permits when the agency finds numeric effluent limitations to be infeasible. DEQ may also impose BMPs which are "reasonably necessary ... to carry out the purposes of the Law and the CWA" under 9 VAC 25-31-220 K 3. The conditions in the permit are issued under the authority of both of these regulatory provisions. The pollution prevention or BMP requirements in this permit operate as limitations on effluent discharges that reflect the application of BAT/BCT. This is because the BMPs identified require the use of source control technologies which, in the context of this general permit, are the best available of the technologies economically achievable (or the equivalent BCT finding).

All facilities intending to be covered by this general permit must prepare and implement a storm water pollution prevention plan. Existing general permit holders that are renewing coverage under the permit must update and implement any changes to their SWPPP by October 1, 2009. Facilities that are seeking new coverage under the general permit must develop and implement the SWPPP prior to submittal of the Registration Statement. Facilities are not required to submit the pollution prevention plans for review unless they are requested by the Department. When a plan is reviewed by DEQ, the Director can require the permittee to amend the plan if it does not meet the minimum permit requirements.

The permit addresses general storm water pollution prevention plan (SWPPP) requirements that apply to all facilities that are covered under the permit, and sector-specific SWPPP requirements that apply to specific categories of industries. The following is a discussion of the common SWPPP requirements for all industries. These are the permit requirements which apply to discharges associated with any of the industrial activities covered by this permit. These common requirements may be amended or further clarified in the industry sector-specific pollution prevention plan requirements of the permit.

Both the general SWPPP and the industry sector-specific requirements are derived from the 2000 EPA MSGP, and were modified for this permit reissuance based on changes EPA made in their proposed 2006 MSGP and their final 2008 MSGP. The requirements are based on an evaluation of the nature of the industrial activity, the pollutants in that activity's storm water and applicable pollution control options. This framework provides the necessary flexibility to address the variable risk for

pollutants in storm water discharges associated with the different types of industrial activity addressed by this permit. This approach also assures that facilities have the opportunity to identify procedures to prevent storm water pollution at a particular site that are appropriate, given processes employed, engineering aspects, functions, costs of controls, location, and age of the facility. The approach taken also allows the flexibility to establish controls that can appropriately address different sources of pollutants at different facilities. These industry sector-specific requirements are additive for facilities where co-located industrial activities occur. For example, if a facility has both a primary metals operation and a scrap recycling operation, then that facility is subject to the pollution prevention plan requirements of both of those sectors in the permit.

The pollution prevention approach in this general permit focuses on two major objectives: (1) to identify sources of pollution potentially affecting the quality of discharges from the facility; and (2) to describe and ensure implementation of practices to minimize and control pollutants in discharges from the facility and to ensure compliance with the terms and conditions of this permit.

The storm water pollution prevention plan requirements in the general permit are intended to facilitate a process whereby the operator of the industrial facility thoroughly evaluates potential pollution sources at the site and selects and implements appropriate measures designed to prevent or control the discharge of pollutants in storm water runoff. The process involves the following four steps: (1) formation of a team of qualified plant personnel who will be responsible for preparing the plan and assisting the plant manager in its implementation; (2) site description and assessment of potential storm water pollution sources; (3) selection and implementation of appropriate management practices and controls; and (4) periodic evaluation of the effectiveness of the plan to prevent storm water contamination and comply with the terms and conditions of this permit.

Storm water pollution prevention plans may reference the existence of other plans such as those for erosion and sediment control (ESC), Spill Prevention Control and Countermeasure (SPCC) plans developed for the facility under Section 31.1 of the CWA, or Best Management Practices (BMP) programs otherwise required for the facility as long as the other plan meets the minimum requirements of the permit and it is incorporated into the storm water pollution prevention plan. Any other plans so referenced become enforceable parts of the permit.

The pollution prevention approach is the most environmentally sound and cost-effective way to control the discharge of pollutants in storm water runoff from industrial facilities. Two classes of management practices are generally employed at industries to control the non-routine discharge of pollutants from sources such as storm water runoff, drainage from raw material storage and waste disposal areas, and discharges from places where spills or leaks have occurred. The first class of management practices includes those that are low in cost, applicable to a broad class of industries and substances, and widely considered essential to a good pollution control program. Some examples of practices in this class are good housekeeping, employee training, and spill response and prevention procedures. The second class includes management practices that provide a second line of defense against the release of pollutants. This class addresses containment, mitigation, and cleanup. Experience with these practices and controls has shown that they can be used in permits to reduce pollutants in storm water discharges in a cost-effective manner. Pollution prevention has been and continues to be the cornerstone of the VPDES permitting program for storm water. EPA has developed guidance entitled "Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices", September 1992, to assist permittees in developing and implementing pollution prevention measures. This publication is available on EPA's web page at the following address: [http://cfpub2.epa.gov/npdes/docs.cfm?program\\_id=6&view=allprog&sort=name](http://cfpub2.epa.gov/npdes/docs.cfm?program_id=6&view=allprog&sort=name)

1. Contents of the Plan. The storm water pollution prevention plans generally must describe the following elements:

a. Pollution Prevention Team. As a first step in the process of developing and implementing a storm water pollution prevention plan, permittees are required to identify a qualified individual



or team of individuals to be responsible for developing the plan and assisting the facility or plant manager in its implementation. When selecting members of the team, the plant manager should draw on the expertise of all relevant departments within the plant to ensure that all aspects of plant operations are considered when the plan is developed. The plan must clearly describe the responsibilities of each team member as they relate to specific components of the plan. In addition to enhancing the quality of communication between team members and other personnel, clear delineation of responsibilities will ensure that every aspect of the plan is addressed by a specified individual or group of individuals. Pollution Prevention Teams may consist of one individual where appropriate (e.g., in certain small businesses with limited storm water pollution potential).

b. Site Description. Each storm water pollution prevention plan must describe activities, materials, and physical features of the facility that may contribute significant amounts of pollutants to storm water runoff or, during periods of dry weather, result in pollutant discharges through the separate storm sewers or storm water drainage systems that drain the facility. This assessment of storm water pollution risk will support subsequent efforts to identify and set priorities for necessary changes in materials, materials management practices, or site features, as well as aid in the selection of appropriate structural and nonstructural control techniques. Some operators may find that significant amounts of pollutants are running onto the facility property. Such operators should identify and address the contaminated run-on in the storm water pollution prevention plan. If the run-on cannot be addressed or diverted by the permittee, the Department should be notified. If necessary, the DEQ may require the operator of the adjacent facility to obtain a permit.

Activities At the Facility, General Location Map and Site Map. The plan must contain a map of the site that shows the location of outfalls covered by the permit (or by other VPDES permits), the pattern of storm water drainage, an indication of the types of discharges contained in the drainage areas of the outfalls, structural features that control pollutants in runoff, surface water bodies (including wetlands), places where significant materials are exposed to rainfall and runoff, and locations of major spills and leaks that occurred in the 3 years prior to the date of the submission of a registration statement to be covered under this permit. The map also must show areas where the following activities are exposed to precipitation: fueling stations; vehicle and equipment maintenance and/or cleaning areas; loading/unloading areas; locations used for the treatment, storage or disposal of wastes; liquid storage tanks; processing and storage areas; access roads, rail cars and tracks; the location of transfer of substance in bulk; and machinery. The map must also show the location and description of non-storm water discharges, and the location and source of run-off from adjacent property containing significant quantities of pollutants of concern to the facility (the permittee may include an evaluation of how the quality of the storm water running onto the facility impacts the facility's storm water discharges). The name of the nearest receiving waters, including intermittent streams, dry sloughs, arroyos and the areal extent and description of wetland sites that may receive discharges from the facility must also be included.

c. Summary of Potential Pollutant Sources. The description of potential pollution sources culminates in a narrative assessment of the risk potential that sources of pollution pose to storm water quality. This assessment should clearly point to activities, materials, and physical features of the facility that have a reasonable potential to contribute significant amounts of pollutants to storm water. Any such activities, materials, or features must be addressed by the measures and controls subsequently described in the plan. In conducting the assessment, the facility operator must consider the following activities: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and onsite waste disposal practices. The assessment must list any significant pollution sources at the site and identify the pollutant parameter or

parameters (i.e., biochemical oxygen demand, suspended solids, etc.) associated with each source.

d. Spills and Leaks. The plan must include a list of any significant spills and leaks of toxic or hazardous pollutants that occurred in the 3 years prior to the date the SWPPP was prepared or amended. Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under Section 311 of CWA (see 40 CFR 110.10 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (see 40 CFR 302.4). Significant spills may also include releases of oil or hazardous substances that are not in excess of reporting requirements and releases of materials that are not classified as oil or a hazardous substance.

The listing should include a description of the causes of each spill or leak, the actions taken to respond to each release, and the actions taken to prevent similar such spills or leaks in the future. This effort will aid the facility operator as she or he examines existing spill prevention and response procedures and develops any additional procedures necessary to fulfill the requirements of the permit.

e. Sampling Data. Any existing data on the quality or quantity of storm water discharges from the facility must be summarized in the plan. These data may be useful for locating areas that have contributed pollutants to storm water. The description should include a discussion of the methods used to collect and analyze the data. Sample collection points should be identified in the plan and shown on the site map.

f. Storm Water Controls. Following completion of the source identification and assessment phase, the permit requires the permittee to evaluate, select, and describe the pollution prevention measures, best management practices (BMPs), and other controls that will be implemented at the facility. BMPs include processes, procedures, schedules of activities, prohibitions on practices, and other management practices that prevent or reduce the discharge of pollutants in storm water runoff.

Source reduction measures include, among others, preventive maintenance, chemical substitution, spill prevention, good housekeeping, training, and proper materials management. Where such practices are not appropriate to a particular source or do not effectively reduce pollutant discharges, DEQ supports the use of source control measures and BMPs such as material segregation or covering, water diversion, and dust control. Like source reduction measures, source control measures and BMPs are intended to keep pollutants out of storm water. The remaining classes of BMPs, which involve recycling or treatment of storm water, allow the reuse of storm water or attempt to lower pollutant concentrations prior to discharge.

The pollution prevention plan must discuss the reasons each selected control or practice is appropriate for the facility and how each will address one or more of the potential pollution sources identified in the plan. The plan also must include a schedule specifying the time or times during which each control or practice will be implemented. In addition, the plan should discuss ways in which the controls and practices relate to one another and, when taken as a whole, produce an integrated and consistent approach for preventing or controlling potential storm water contamination problems. The permit requirements included for the various industry sectors in the permit generally require that the portion of the plan that describes the measures and controls address the following minimum components.

When "minimize/reduce" is used relative to pollution prevention plan measures, it means to consider and implement best management practices that will result in an improvement over the baseline conditions as it relates to the levels of pollutants identified in storm water discharges with due consideration to economic feasibility and effectiveness.

(1) Good Housekeeping. Good housekeeping involves using practical, cost-effective methods to identify ways to maintain a clean and orderly facility and keep contaminants out of separate storm sewers. It includes establishing protocols to reduce the possibility of mishandling chemicals or equipment and training employees in good housekeeping techniques. These protocols must be described in the plan and communicated to appropriate plant personnel.

(2) Eliminating and Minimizing Exposure. Eliminating exposure of all industrial activities to precipitation may make the facility eligible for the "Conditional Exclusion for No Exposure" provision of 9 VAC 25-31-120 E, thereby eliminating the need to have a permit. Where practicable, industrial materials and activities should be protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, or run-off.

(3) Preventive Maintenance. Permittees must develop a preventive maintenance program that involves regular inspection and maintenance of storm water management devices and other equipment and systems. The program description should identify the devices, equipment, and systems that will be inspected; provide a schedule for inspections and tests; and address appropriate adjustment, cleaning, repair, or replacement of devices, equipment, and systems. For storm water management devices such as catch basins and oil/water separators, the preventive maintenance program should provide for periodic removal of debris to ensure that the devices are operating efficiently. For other equipment and systems, the program should reveal and enable the correction of conditions that could cause breakdowns or failures that may result in the release of pollutants.

(4) Spill Prevention and Response Procedures. Based on an assessment of possible spill scenarios, permittees must specify appropriate material handling procedures, storage requirements, containment or diversion equipment, and spill cleanup procedures that will minimize the potential for spills and in the event of a spill enable proper and timely response. Areas and activities that typically pose a high risk for spills include loading and unloading areas, storage areas, process activities, and waste disposal activities. These activities and areas, and their accompanying drainage points, must be described in the plan. For a spill prevention and response program to be effective, employees should clearly understand the proper procedures and requirements and have the equipment necessary to respond to spills.

(5) Routine Facility Inspections. In addition to the comprehensive site evaluation, facilities are required to conduct quarterly inspections of designated equipment and areas of the facility. Industry-specific requirements for such inspections, if any, are presented in the permit. When required, qualified personnel must be identified to conduct inspections. A set of tracking or follow-up procedures must be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections must be maintained. These periodic inspections are different from the comprehensive site evaluation. Equipment, area, or other inspections are typically visual and are normally conducted on a regular basis (e.g., daily inspections of loading areas). Requirements for such periodic inspections are specific to each industrial sector in this permit, whereas the comprehensive site compliance evaluation is required of all industrial sectors. Area inspections help ensure that storm water pollution prevention measures (e.g., BMPs) are operating and properly maintained on a regular basis. The comprehensive site evaluation is intended to provide an overview of the entire facility's pollution prevention activities. See below for more information on the comprehensive site evaluation.

(6) Employee Training. The pollution prevention plan must describe a program for informing personnel at all levels of responsibility of the components and goals of the storm water pollution prevention plan. The training program should address topics such as good housekeeping, materials management, and spill response procedures. Where appropriate,

contractor personnel also must be trained in relevant aspects of storm water pollution prevention. A schedule for conducting training must be provided in the plan. DEQ recommends that facilities conduct training annually at a minimum. However, more frequent training may be necessary at facilities with high turnover of employees or where employee participation is essential to the storm water pollution prevention plan.

(7) Sediment and Erosion Control. The pollution prevention plan must identify areas that, due to topography, activities, soils, cover materials, or other factors have a high potential for significant soil erosion. The plan must identify measures that will be implemented to limit erosion in these areas.

(8) Management of Runoff. The plan must contain a narrative evaluation of the appropriateness of traditional storm water management practices (i.e., practices other than those that control pollutant sources) that divert, infiltrate, reuse, or otherwise manage storm water runoff so as to reduce the discharge of pollutants. Appropriate measures may include, among others, vegetative swales, collection and reuse of storm water, inlet controls, snow management, infiltration devices, and wet detention/retention basins.

Based on the results of the evaluation, the plan must identify practices that the permittee determines are reasonable and appropriate for the facility. The plan also should describe the particular pollutant source area or activity to be controlled by each storm water management practice. Reasonable and appropriate practices must be implemented and maintained according to the provisions prescribed in the plan.

In selecting storm water management measures, it is important to consider the potential effects of each method on other water resources, such as ground water. Although storm water pollution prevention plans primarily focus on storm water management, facilities must also consider potential ground water pollution problems and take appropriate steps to avoid adversely impacting ground water quality. For example, if the water table is unusually high in an area, an infiltration pond may contaminate a ground water source unless special preventive measures are taken.

2. Maintenance. The permittee must maintain all BMPs identified in the plan in effective operating condition. If the facility site inspections identify BMPs that are not operating effectively, the permittee must perform maintenance before the next anticipated storm event, or as necessary to maintain the continued effectiveness of storm water controls. In the case of non-structural BMPs, the effectiveness of the BMP must be maintained by appropriate means, such as spill response supplies available and personnel trained, etc.

3. Allowable Non-storm Water Discharges. Sources of non-storm water that are specifically identified in the permit as being eligible for authorization under the general permit must be identified in the plan. Pollution prevention plans must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water discharge.

If non-storm water discharges from the facility are authorized by a separate VPDES permit, reference to that permit must be included in the plan. Any requirements of the separate VPDES permit or a pretreatment requirement for an indirect discharger to a sanitary sewer must be considered in developing the plan.

4. Comprehensive Site Compliance Evaluation. The permit requires that the storm water pollution prevention plan describe the scope and content of the comprehensive site compliance evaluations that qualified personnel will conduct to (1) confirm the accuracy of the description of potential pollution sources contained in the plan, (2) determine the effectiveness of the plan, and (3) assess compliance with the terms and conditions of the permit. Note that the comprehensive site compliance evaluations are not the same as routine facility inspections or other inspections. The plan must indicate the frequency of comprehensive evaluations which must be at least once a

year, except where evaluations are shown in the plan to be impractical for inactive mining sites due to remote location and inaccessibility. The individual or individuals who will conduct the comprehensive site compliance evaluation must be identified in the plan and should, ideally, be members of the pollution prevention team. Material handling and storage areas and other potential sources of pollution must be visually inspected for evidence of actual or potential pollutant discharges to the drainage system. Evaluators also must observe erosion controls and structural storm water management devices to ensure that each is operating correctly. Equipment needed to implement the pollution prevention plan, such as that used during spill response activities, must be evaluated to confirm that it is in proper working order. Evaluators should also look for evidence of pollutants discharging to surface waters at all facility outfalls, and the condition of and around the outfall, including flow dissipation measures to prevent scouring. The compliance evaluation must also include a review of training performed, inspections completed, maintenance performed, quarterly visual examinations, and effective operation of BMPs.

In the 2004 ISWGP, a certification of non-storm water discharges was part of the Non-storm Water Discharges subsection of the SWPPP. For this permit reissuance, the certification has been moved to the Comprehensive Site Compliance Evaluation subsection of the permit, and has been changed to an annual evaluation. The permit now requires that discharges from the site be tested or evaluated annually for the presence of non-storm water discharges. The evaluation documentation must describe possible significant sources of non-storm water, the results of any test and/or evaluation conducted to detect such discharges, the test method or evaluation criteria used, the dates on which tests or evaluations were performed, and the onsite drainage points directly observed during the test or evaluation. Acceptable test or evaluation techniques include dye tests, television surveillance, observation of outfalls or other appropriate locations during dry weather, water balance calculations, and analysis of piping and drainage schematics. The permit also allows the permittee to request in writing to the Department that the facility be allowed to conduct annual outfall evaluations at 20% of the outfalls. If approved, the permittee must evaluate at least 20% of the facility outfalls each year on a rotating basis such that all facility outfalls will be evaluated during the period of coverage under this permit.

The results of each comprehensive site compliance evaluation must be documented in a report signed by an authorized facility official. The report must describe the scope of the comprehensive site evaluation, the personnel making the comprehensive site evaluation, the date(s) of the comprehensive site evaluation, and any major observations relating to implementation of the storm water pollution prevention plan. Comprehensive site evaluation reports must be maintained with the SWPPP. Based on the results of the comprehensive evaluation, the permittee must modify the SWPPP as necessary to correct any deficiencies that were discovered. Revisions to the SWPPP must be completed within 30 days following the evaluation. An extension may be requested from DEQ. If existing BMPs need to be modified or if additional BMPs are necessary, the permittee must complete the implementation before the next anticipated storm event, if practicable, but not more than 60 days after completion of the comprehensive evaluation. Again, an extension may be requested from DEQ.